A Study of Canadian Winery Websites: Identification of a Market Integration Stage

Ying Zhu
Master in Computer Science
Central University for Nationalities
Beijing, China, 2000

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The University of Lethbridge
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Abstract

While website features of many kinds have been examined in numerous studies, few of these studies look at the use of websites by combining information technology and marketing perspectives. Also, no industry-specific website stage model has ever been proposed for Canadian wineries in particular. This research attempts to fill this gap by developing such a model. For this purpose, a census of 206 Canadian winery websites was conducted, and content analysis was used on the results. It was hypothesized that a technology-driven model introduced by Rao, Metts and Monge (2003) could be expanded by adding Market Integration as a new stage. Supporting the proposed hypotheses, 93.7% of Canadian wineries were reported to have market integration features on their websites, and the proportion of winery websites possessing such features proved to be greater in each subsequent stage in Rao's model.

献给我的爱人和家人!

To Those I Loved & Those Who Loved Me!

Thank You!

Thank you so much for being there.

Thank you so much for standing up for me.

Thank you so much for loving me everyday.

Thank you so much for making me dinner everyday.

Thank you so much for never scolding me for being myself.

Thank you so much for being with me through the good and the bad.

Thank you so much for never being angry with me…for long.

Thank you so much for taking me on your trips.

Thank you so much for never giving up on me.

Thank you so much for trusting me.

Thank you so much for all your kindness.

Thank you so much for laughing at my jokes.

Thank you so much for always telling me the truth.

Thank you so much for always letting me tell you the truth.

Thank you so much for teaching me how to do right (most of the time).

Thank you so much for understanding my mind even when I don't.

Thank you so much for teaching me how to be strong again.

Thank you so much for letting me do what I want to do.

Thank you so much for being my best friend.

And thank you so much for being my husband!

My parents and my sisters receive my deepest gratitude and love for their dedication and the many years of support. I thank them for their understanding and love. Their support and encouragement enabled me to complete this work.

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Drs. Basil and Hunter were always there to meet and talk about my ideas and the problems and roadblocks that unavoidably appear in the course of performing research. Their constructive and practical advice was essential to the completion of this thesis. They have taught me innumerable lessons and provided insights on the workings of academic research in general. They are not only visionary researchers but also, and most importantly, kind, mostly helpful and trusting professors.

I am very grateful to my external reader, Dr. Carmine Sellitto, who introduced me to the wine industry as a research area, and provided constructive suggestions for this project. His professional input and tips helped me to get the study off on the right track.

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1. Introduction

The use of the Internet in business has been widely accepted as an indispensable facilitator for economic development. Companies use Internet technology to advance business processes, improve productivity, achieve new markets, enhance customer service, lower communication costs, and hasten product distribution (Kleindl, 2000; Watson et al. 2000). A website on the Internet provides organizations with a new way to convey their information, a new platform to display their image and a new channel of communications to influence stakeholders.

Websites on the Internet are created to facilitate synergy between traditional business models and this new technology through research, communications, and relationship management activities. Commercial organizations have begun to utilize websites as an instrument to build their competitive advantage. The use of Internet-based technology has penetrated into many aspects of modern society, such as government, businesses, institutions, academic communities and personal spheres, and this tendency is likely to continue to increase (Sandy & Burgess, 2003).

More and more Canadian businesses embrace the Internet as part of their company practices. In 2002, about 31% of firms had a website, and this increased to 34% in 2003. About 85% of Canadian gross business income is generated by these businesses (Electronic commerce and technology, 2003). An important part of the Canadian economy, the Canadian wine industry, is increasingly using information technology as well as the Internet to build partnerships with governments, suppliers and consumers. Also, Canadian agriculture as a whole is utilizing both computers and the Internet more and more. Farmers in Quebec have the highest user rate (48% of farms using computers), followed by Alberta (41%), British Columbia (40%), Ontario (39%),

Manitoba (36%), Atlantic Canada, and Saskatchewan (35%). (Canada: Farmers embrace computers and Internet, 2002). Clearly, agricultural businesses will expand the use of Internet technology (Rowley, 2000; Gregor & Jones, 1999; Badger, 2000), and farm-based enterprises, such as wineries, will likely follow this tendency.

Traditional business processes have been significantly changed by the Internet, and wineries are wise to accept the new technology to achieve a better fit in this new economic environment. A website can influence the way of doing business, extend the market scope, or even modify a company's work procedures, so it is crucial to identify the website usage of businesses. Hence, conducting a study to create an industry-specific website stage model that can be used to assess the nature of website usage in Canadian wineries is important. This research proposes a new concept, Market Integration, and seeks to determine whether it can be added into Rao's model as a new stage. Figure 1 shows the research area that this research will fit into.

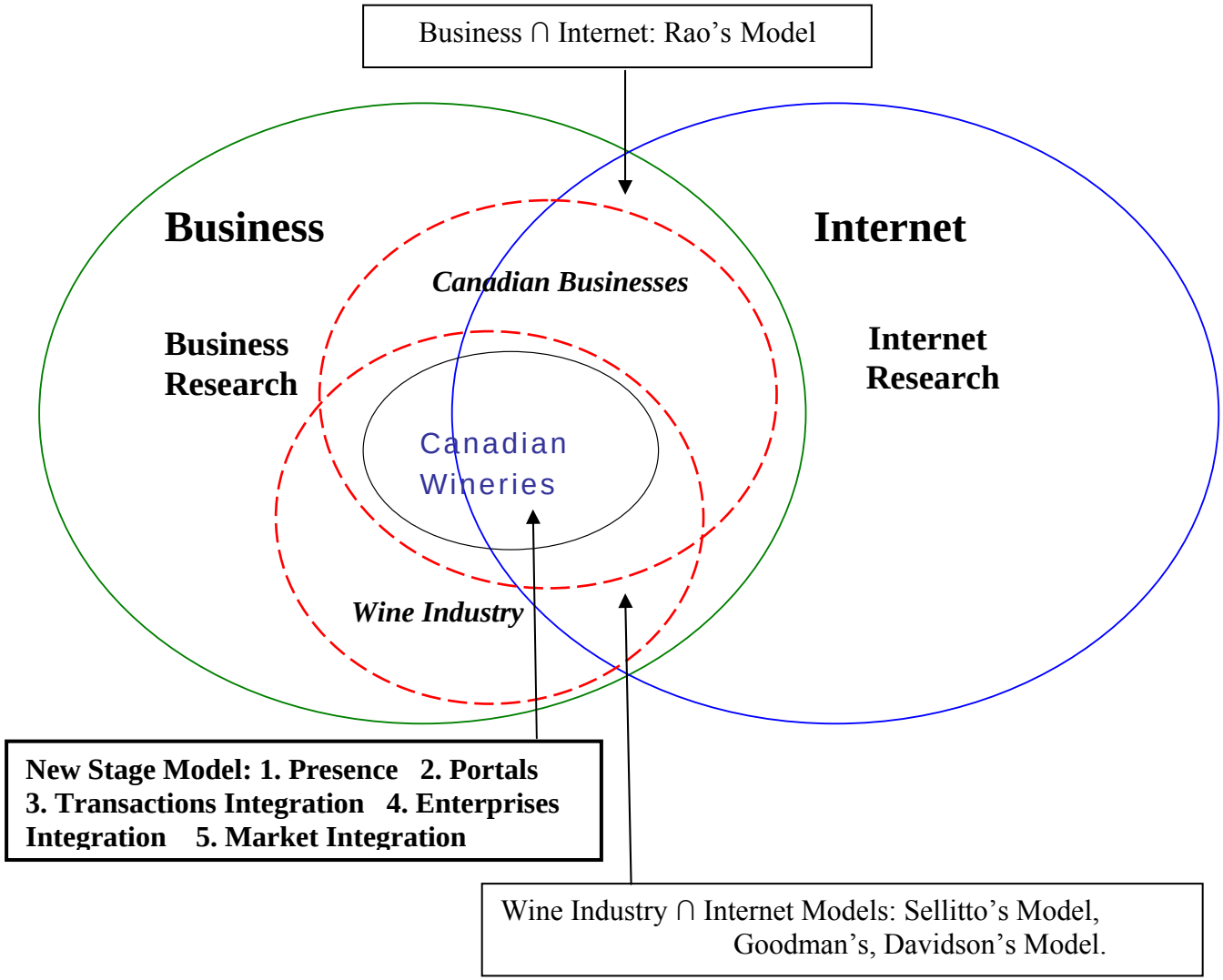

Figure 1. Location of Current Research

This research makes primary contributions in three areas. Firstly, it extends Rao's model (Rao, Metts and Monge, 2003) in two ways: by adding a new stage named "Market Integration," and by dividing the transactions integration stage into two levels. Secondly, this study develops content features for Canadian wineries to assess their websites. Thirdly, it employs a unique data set of Canadian wineries' websites, and uses this sample to test all stages in the currently developed model. To select the research sample, the definition of winery is of crucial importance. In this study, it was adopted from Industry Canada, a department of the federal government (Strategis History, 2005). It states that wineries are establishments mainly engaged in manufacturing wine or brandy, from grapes or other fruit. For instance, companies might grow grapes and produce wine, or purchase grapes to make wine, or they could be blending wines or distilling brandy (Strategis - Definition of Wineries, 2005).

This research will be conducted using the content analysis method. A winery's website will be the unit of analysis. Canadian wineries with a website will comprise the research sample. The first expected result will be that the newly established Market Integration Stage sufficiently extends Rao's model and its features could be found on the wineries' websites. Second, wineries' websites in the transactions integration stage can be separated into two levels, indirect and direct money transactions. Another expectation is that each winery's website could be mapped onto one of the stages in the revised model by examining their web features.

2. Background Information

2.1. Internet Adoption in Canadian Business

Canada is one of the leading countries in information technology usage. Compared to other developed countries, Canada has an advanced technology infrastructure which employs extensive Internet applications. The report of *The 2004 e-readiness rankings* (2004) provided a world regional landscape for e-readiness. E-readiness is a term used to describe to what extent a country's business environment is facilitating Internet-based commercial opportunities; it is a measure of a country's e-business environment and it includes a group of factors that indicate the amenability of a market to Internet-based opportunities (The Economist Intelligence Unit e-readiness rankings, 2002). There are six distinctive categories of indicators: Connectivity and technology infrastructure, Business environment, Consumer and business adoption, Legal and policy environment, Social and cultural environment, and Supporting e-services. These have been used to rank 64 countries by the EIU (The 2004 e-readiness rankings report, 2004). In general, countries in Northern Europe and North America score the highest because their businesses as well as their customers are highly involved in relevant Internet applications. According to this report, Canada ranks 11th overall, with an excellent environment for the diffusion of Internet technology, especially e-commerce, in Canadian businesses.

Table 1 Economist Intelligence Unit e-readiness rankings, 2004
(Top 15 e-readiness Countries)

E-readiness ranking (of 64)	2003 ranking	Country	E-readiness score
1	2	Denmark	8.28
2	3 (tie)	UK	8.27
3	1	Sweden	8.25
4	7	Norway	8.11
5	6	Finland	8.08
6	3 (tie)	US	8.04
7	12	Singapore	8.02
8	3 (tie)	Netherlands	8.00
9	10 (tie)	Hong Kong	7.97
10	8	Switzerland	7.96
11	**10 (tie)**	**Canada**	**7.92**
12	9	Australia	7.88
13	13	Germany	7.83
14	16	South Korea	7.73
15	14	Austria	7.68

Source: The 2004 e-readiness rankings report (2004).

Internet as a tool is gaining broad acceptance in Canadian companies. Due to the early introduction of an Electronic Commerce policy, a large initial pool of Internet users and an advanced technology platform, Canada plays a leading role in worldwide Internet usage (Canadian e-Commerce Statistics, 2004). The magnitude of Canadian firms involved in Internet usage can be clearly seen in Tables 2 and 3. In both tables, Canadian firms have been classified into three groups: small, medium and large. The columns list the percentage of enterprises that use the Internet (Internet use), those with a website (web presence), those which use the Internet to buy goods or services (online purchase) and the percentage of businesses that use the Internet to sell products or services (online selling).

In 2002, 27% of small firms and 62% of medium-sized companies had a website. The number increased to 29% and 66% respectively in 2003. In this study, Canadian wineries with a website will be analyzed and the percentage of wineries with a website will be reported in the results section below.

Table 2 E-business adoption rates in Canada, 2002, by size of firm

Size of firm	Internet Use	Web Presence	Online Purchases	Online Selling
Small	73%	27%	29%	7%
Medium	92%	62%	47%	13%
Large	99%	77%	57%	16%
Total	75.7%	31.5%	31.7%	7.5%

Source: Canadian e-Commerce Statistics (2003).

Table 3 E-business adoption rates in Canada, 2003, by size of firm

Size of firm	Internet Use	Web Presence	Online Purchases	Online Selling
Small	76%	29%	35%	6%
Medium	94%	66%	50%	14%
Large	97%	77%	61%	16%
Total	78%	34%	37%	7%

Source: Canadian e-Commerce Statistics (2004).

2.2. Internet Adoption in Canadian Wineries

The Canadian wine industry is a value-added component of the Canadian food and beverage industry. Canada has over 300 licensed wineries, with new companies continually emerging (Canada's wineries, 2003). Canadian wine is primarily produced in British Columbia (BC) (36% of total shipments) and Ontario (35%) (World Wine Situation, 2004). The Niagara Peninsula of southern Ontario and the Okanagan Valley of BC are two essential wine-producing regions in Canada (Canada's wineries, 2003). Additional wine-producing areas in the provinces of Quebec, Nova Scotia, New Brunswick and Prince Edward Island are also flourishing (Policy Resolutions Finance and Taxation, 2003).

The growth of the Canadian wine industry is firmly supported by several winery associations, such as the Canadian Vintners Association, the Wine Council of Ontario and the British Columbia Wine Institute. These bodies widely promote international wine sales, while the wine industry is creating a strong relationship with the tourism sector since tourism is conducive to the marketing of Canadian wine (World Wine Situation, 2004).

Several authors suggest that the wine industry in general can benefit from the adoption of Internet technologies (Goodman 2001; Major 2000; Mueller and Stricker 2000). The Internet can be a powerful tool to carry out permission marketing (Godin, 1999), which is a concept that features customers giving companies permission to send product-related documents or materials to them. The use of email and websites for direct marketing is complementary to direct cellar door sales and mail order activities, and wineries using these approaches will likely realize increased sales (Sellitto and Martin, 2002).

The provinces of Ontario and British Columbia (BC) are two eminent wine-producing sectors. The number of wineries employing a website has been obtained from the winery list posted on two non-profit websites, Wine Dining (http://www.winedining.net) and BCWINE.COM (http://www.bcwine.com). All wineries that provide a website address are included here. A surprising 65 out of 90 (72%) wineries in Ontario and 45 out of 60 (75%) wineries in BC have their own website. The Internet adoption rate is much higher in the wine industry than the average Internet adoption rate of 34% for Canadian firms overall.

3. Research Model Development

3.1. Reference Model

The exponential growth in Internet connectivity and use of e-commerce as a new business channel has occasioned the development of many new frameworks that could provide a better understanding of businesses on the Internet (Burgess & Cooper, 2000). While there are some frameworks proposed for understanding website features in general (Hoffman and Novak, 1996; Cappel and Myerscough, 1996; Liu, Arnett, Capella and Beatty, 1997; Timmers, 1998), few of them examine the nature of website usage in order to help companies extend their own website use. Numerous studies also analyze website features from different perspectives, but only a limited number investigate website features related to the wine industry (Davidson, 2002; Sellitto and McKenzie 2005). Furthermore, no research has been found which explores a website stage model for Canadian wineries. This present study attempts to fill this gap by modifying an existing website stage model in order to achieve a revised industry-specific model for Canada.

Following a thorough literature review, four valuable studies presenting website models were identified for this research. They are Rao's Model (Rao, Metts and Monge, 2003), Sellitto's Model (Sellitto and McKenzie 2005), Davidson's Model (Davidson, 2002), and Goodman's Model (Goodman, 2003). Each of these models contains useful aspects for the design of this proposed study. Sellitto's and Goodman's models encouraged the author to incorporate marketing aspects in the study. In Sellito's article, a case study approach was used to investigate the motives behind the website features. It provided important results about the reasons behind the shaping of winery websites. Goodman's model also

mentioned that the Internet can be used for marketing purposes. Davidson developed a framework for practitioners to evaluate their website. Rao, Metts and Monge (2003) introduced a website stage model from a technology perspective which gives instructions for the improvement of website usage that could be followed by e-commerce adopters. Comparisons and contrasting analyses were carried out among the four models, and the major characteristics of each model have been identified (Table 4).

Table 4 Model Contrast and Comparison

	Rao's Model	**Sellitto's Model**	**Davidson's Model**	**Goodman's Model**
Rationale	Developed from logical explanation.	Developed from logical explanation.	Developed from existing framework and web design guides.	Based on previous research.
Model Nature	Dynamic stage model	Static model	Static model	Internet Use with dynamic stages
Research Method	Case study, interview	Case study, interview	No research method	Interview and survey
Nature of Industry	Not specific	Specific to wine industry	Specific to wine industry	Specific to wine industry
Size	Specific to small and medium-sized businesses	Specific to small and medium-sized businesses	Not specific	Not specific
Nature of Research	Quantitative	Qualitative	Qualitative	Quantitative

Although each of the above-mentioned studies contains valuable different aspects, for the purposes of this research, Rao's model was chosen as the reference model for the

following five reasons. First, it is a dynamic model which predicts the evolutionary process of a website. Second, it is specific to small and medium-sized companies (SMEs), which a majority of wineries in Canada are. Of the 66 members in Ontario's VQA (Vintners Quality Alliance) between 2002 and 2003, only three are large wineries (VQA's Annual Report, 2004). Unfortunately, relevant information from BC is not available. Third, Rao's model is not industry-specific, thus providing an opportunity to develop an industry-specific model for the wine industry in Canada. Both Sellitto's (2005) and Davidson's (2002) research presents useful wine industry characteristics which will be taken into consideration here. These authors describe many concrete items which will be incorporated into this study when constructing an industry-specific model for Canadian wineries. Fourth, longitudinal research conducted in Australia by Burgess, Sellitto and Wenn from 2000 to 2002 has successfully adopted Rao's model to examine the website stages of Australian wineries (Burgess, Sellitto & Wenn, 2005 forthcoming). Fifth, in Rao's article, future research has been suggested to develop concrete web features for each stage of the model, and this study will attempt to do so.

Rao, Metts and Monge (2003) proposed a staged model demonstrating e-commerce development by small and medium-sized enterprises which will be used as a point of reference in this study (see Figure 2). The model includes four stages: Presence, Portals, Transactions Integration and Enterprises Integration. These four stages indicate the level of Internet usage in which a company is involved.

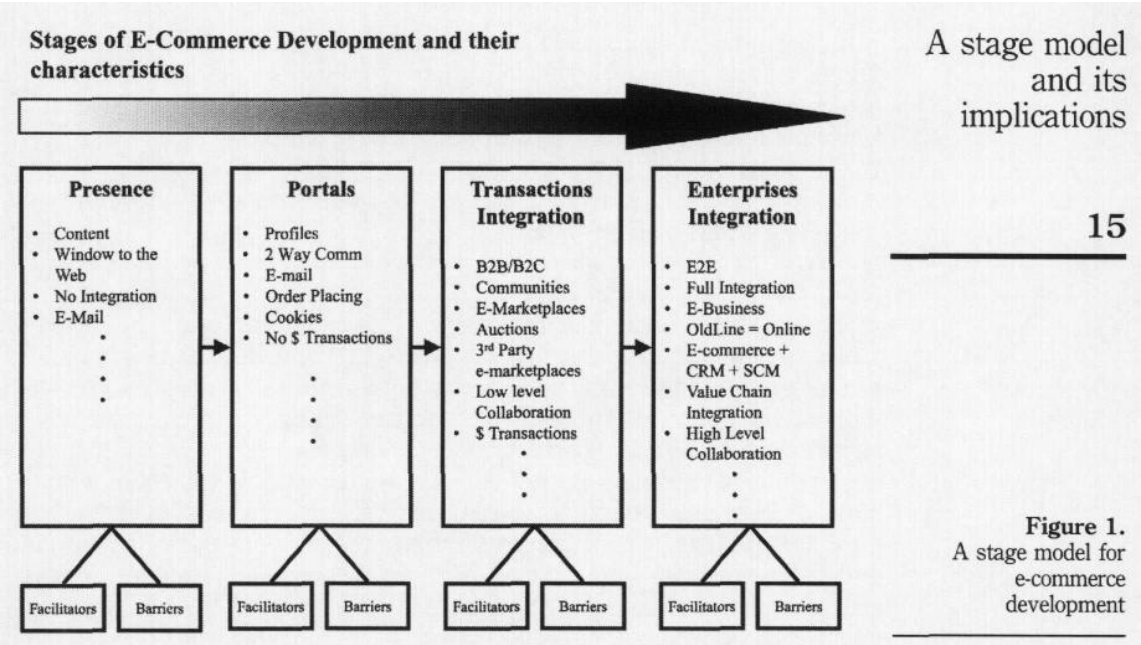

Figure 2. Rao's Model (Rao, Metts and Monge, 2003, p.15)

For this research, the following interpretations of the above-mentioned stages have been provided and will be used:

1) Presence. A company in this stage has established a website to exhibit its information, such as company history and product descriptions, to anyone surfing the Internet. This stage utilizes one-way communication, namely, information flows from the site to browsers in a single direction.
2) Portals. An organization in this stage not only displays information on its website, but also communicates with participants via the Internet. This stage is characterized by two-way communication, namely, information flows between the business and Internet users in both directions. This level includes the functions of creating customer profiles and cookies, and using e-mail, providing opportunities to place orders online for products, and such.

3) Transactions Integration. When customers purchase products online, the payment function is facilitated either by the vendor's own website or a third party website. Money will be transferred electronically through either website and a buyer can finish the entire purchasing process without getting help from the selling company. Money transactions as a benchmark of this stage are taking place between the business and its customers.

4) Enterprises Integration. Full integration of Customer Relationship Management (CRM), Value Chain Management (VCM), and Supply Chain Management (SCM) is achieved at this stage. Traditional offline businesses and modern e-businesses become indistinguishable due to a successful marriage of front-office and back-office tasks.

Although the model seems to present a natural sequence of stages, a company could enter at any stage. When an organization skips earlier stages, it is expected that the functions of previous stages would already have been fulfilled. According to Rao, Metts and Monge (2003), technology and e-commerce awareness will likely increase. Therefore, a company could reasonably enter a later stage, skipping earlier stages in order to speed up its development process. However, when this occurs it is anticipated that all previous stage issues must be resolved (Rao, Metts and Monge, 2003). These authors have also presented several barriers and facilitators for each stage in the model. The network complexity of companies has been considered a barrier in the enterprises integration stage (Rao, Metts and Monge, 2003). This author believes the network issue does not just present in the enterprises integration stage, but exists in all stages of the website stage model. To explain

such linkages, cluster theory, as described below, can be used.

3.2. Theoretical Background

Cluster theory has been found to be conducive to advance a company's competitive advantages by facilitating increased productivity. This theory is applicable to the wine industry and has been employed by Porter (1998c) in California. His research included a network diagram of the California wine cluster. In this study, Canadian wineries' websites will be examined by using a new concept, market integration, which is based on cluster theory.

Productivity is a considerable factor in modern competition (Porter, 1998c). Cluster theory provides suggestions for government to advance productivity and prosperity (Porter, 1998a). A cluster is a collection of companies in a certain business field located in a specific area, such as a nation, state, city, and country (Porter, 1998b). Competition is influenced by clusters in the following ways: first, clusters enhance the productivity of the interconnected companies located in the same geographic area; second, clusters facilitate and guide the direction of innovation for the interdependent cluster members; and third, clusters reinforce their own competitive advantage by spurring the creation of new businesses (Porter, 1998c). Although knowledge about clusters is available (Becattini, 1990; Harrison, 1994; Pouder and St. John, 1996), few scholars have carried out cluster research from a technology perspective (Scheel, 2002; Sandee and Rietveld, 2001). Therefore, it is important to conduct a study on clusters by examining the influence of the Internet and websites on them within the context of a specific industry.

Networks established among companies, suppliers, service providers, supported industries, and associations (universities, trade associations, and cooperative associations) are a primary prerequisite for a cluster (Porter, 1998a). Figure 3 demonstrates such networks of the California wine cluster (Porter, 1998c).

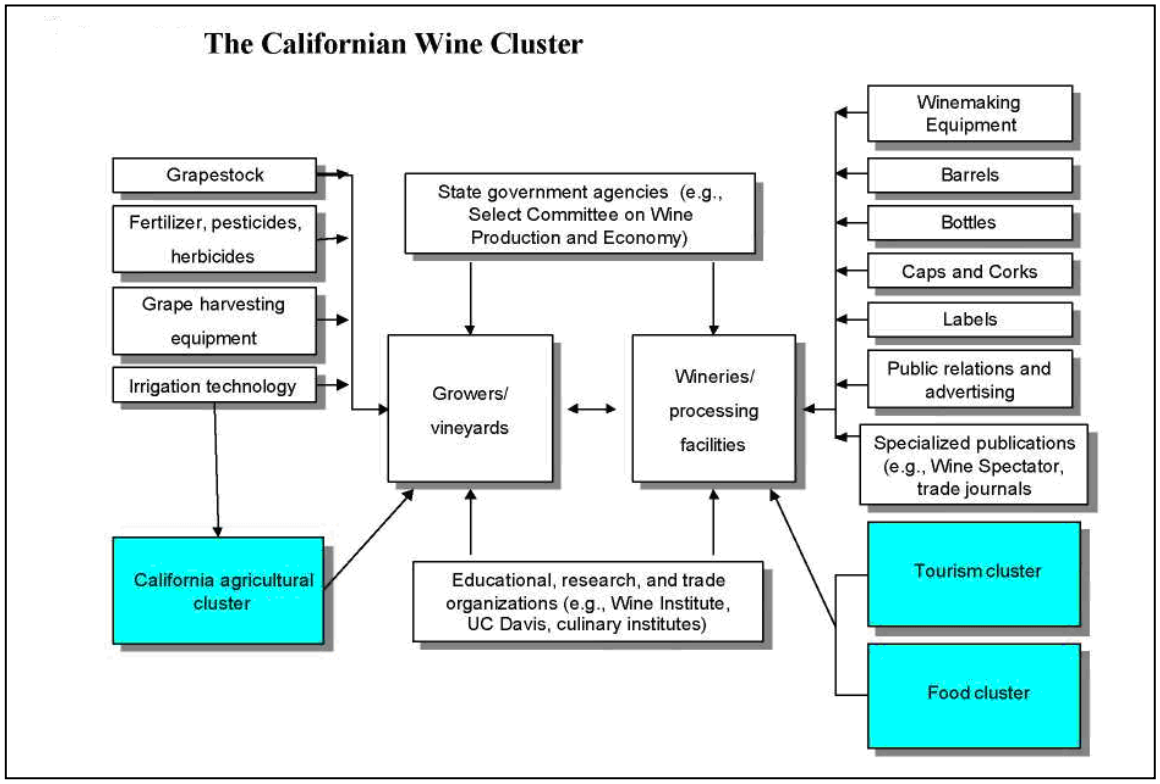

Figure 3. The Californian Wine Cluster (Porter, 1998c)

(Source: Porter, M., E. (1998c). Clusters and the New Economics of Competition. Harvard Business Review, p79)

As cluster members, companies (e.g., suppliers of grapes, barrels, and labels) can function more effectively in obtaining information, accessing technology and associations, and synchronizing with other firms (Porter, 1998c). The Internet as a new technology provides a convenient and efficient way for cluster members to exchange information. The flow of information about demands, techniques, and technology within a cluster improves its

competitive advantage (Porter, 1990). Internet and website technology will, to some extent, facilitate the information flow characteristics of a cluster. Based on cluster theory, the expectation of this research is that virtual networks of the Canadian wine cluster can be found in winery websites.

One way for companies to collaborate with other cluster firms might be linking websites, such as sites in the tourism or food industry, by putting hyperlinks on their own website. Another way for wineries to support the cluster network is by displays of related information about other companies on their own website. These two approaches will be used to measure virtual networks. Web features in the market integration category will be identified to evaluate such relationships between the wine business and other business activities or between wineries and other organizations. Hyperlinks will be assessed, as will content that describes the linkages between different business activities or companies on the website. This study will cover one aspect of the cluster by focusing on the relationships between wineries and other industries. Therefore, suppliers in the upstream of the wine supply chain will not be discussed here.

Information dissemination through winery websites enlarges the market of other businesses, and thus advances the competitive advantage of the whole cluster. This, in turn, facilitates the development of the wine industry. It is a mutually reinforcing process that can be explained by Porter's cluster theory and competitive advantage theory. Therefore, the market integration concept and Rao's website stage model have been combined in order to create a revised model for Canadian wineries. "Market Integration" becomes stage five.

Numerous studies on market integration from global, regional, financial, labour and capital perspectives have been done (Zaheer, 1995; Pasquero, 2000; Fratzscher, 2002; Johansson, Klaesson and Olsson, 2002; Perotti and Thadden 2003). Market integration as a generic concept does not have specific meaning by itself. In each of these studies, it has been combined with an area of research, such as labour or capital, which provides context and meaning. For instance, financial markets are defined as integrated when the law of one price holds (Baele, 2004). Thus, for this study, market integration will exhibit the characteristics of the cluster theory where a company integrates its business with different business activities or with other organizations. It is measured by assessing hyperlinks or linkage-related content on the winery's website.

A majority of research combines global or regional dimensions with specific research fields, such as finance, capital or labor. Few studies have merged a specific industry with market integration. No research considers market integration from both a technical perspective and a view of cluster theory. Combining Internet technology, cluster theory, and a market integration concept makes this research innovative.

As previously mentioned, an essential function of a cluster is to remove obstacles and constraints to the productivity growth of countries, states, regions or zones (Porter, 1998b). When a cluster is established, companies within the cluster begin to mutually support each other and the benefits flow forward, backward and horizontally (Porter, 1990). Information flow is also facilitated by the existence of the cluster (Porter, 1990). Therefore, a winery that uses its own website to spread information of other cluster businesses is consistent with the essential target of cluster theory. Based on the above analysis, this

study expects that the revised model could provide some implications for practitioners in the wine industry.

In this study, a specific definition of the concept of market integration has been presented. It is a state in which a firm integrates its present business with other business activities or other organizations in order to function more effectively in obtaining information, accessing technology and associations, and synchronizing efforts. For the purpose of this research, market integration refers to ways in which a winery integrates its wine selling business with other businesses activities or other organizations such as tour agencies, restaurants and wine associations, in order to expand the potential wine market.

For the present study, market integration is measured by assessing Canadian wineries' websites. Market integration is separated into two categories, internal and external. From a resource-based view, a company's competitiveness depends on their various resources which not only include their own but also the resources shared by the cluster (Wilk and Fensterseifer, 2003). Therefore, firms integrating internal resources only will be labeled as exhibiting internal market integration features. Companies using resources from outside the firm will be labeled as having external market integration features. External market integration means a winery demonstrates relations with other organizations on its website. As discussed in the previous section, this concept is based on cluster theory. Internal market integration means a winery incorporates business activities other than selling wines. This concept derives from a widely accepted market concept: brand-/line-extension. Brand extension refers to a company's launch of a new brand beyond its initial range of products, or outside of its category (Blichfeldt, 2005). In this study, a winery could launch

a new product or service that is related to the wine, but offers a different benefit. Such brand extension is labelled as internal market integration and is measured by assessing hyperlinks or linkage-related content on the winery's website.

1) Examples of internal market integration may include a winery's addition of tour activities, food provision and wine tasting services, relying strictly on its own resources.
2) Examples of external market integration relate to other organizations, such as tour agencies, restaurants and wine associations, which could be utilized or linked to by a winery, thus providing greater market opportunities.

Both internal and external market integration will contribute to productivity growth in the wine industry because formation of cluster advantages, as described above, will be facilitated (Porter, 1998b).

4. Development of Hypotheses

Based on cluster theory, the market integration stage could be added into Rao's model. However, no clear way of showing how market integration might fit into Rao's model exists. Therefore, three competing hypotheses have been proposed. First, market integration is present equally across the four website stages because, from a technological perspective, putting hyperlinks or marketing-related information on web pages does not require extra efforts from the wineries which already have a website. The second hypothesis is that market integration increases across the four website stages. Rao's model displays an evolutionary process of the maturity of using Internet technology. Thus it is possible that some wineries utilize better developed ways of using technology than others. The third and final hypothesis states that market integration will fit into Rao's model as a unique stage. Each stage in Rao's model has a benchmark to distinguish it from the other stages. It is also possible that market integration has its own benchmark and could demonstrate it as a unique stage, which could then distinguish one group of wineries from the others.

Based on the research objectives listed above and the extant state of knowledge about website stages, the following hypotheses are proposed.

- **Hypothetical Model:**

H1a: Market Integration features stay equal in use across the four website stages in Rao's model.

This hypothesis denotes that market integration features can be found in each of the four stages and the proportion of the winery websites exhibiting these features is similar in each stage.

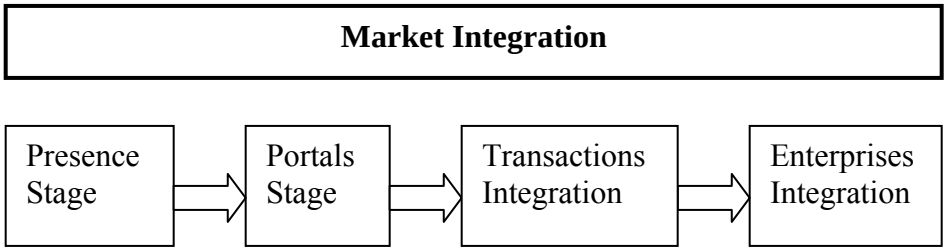

Figure 4. Hypothesis 1a

H1b: Market Integration features increase in use across the four website stages in Rao's model.

This hypothesis states that market integration features can be found in each of the four stages and the proportion of the winery websites that have these features is significantly higher in each subsequent stage.

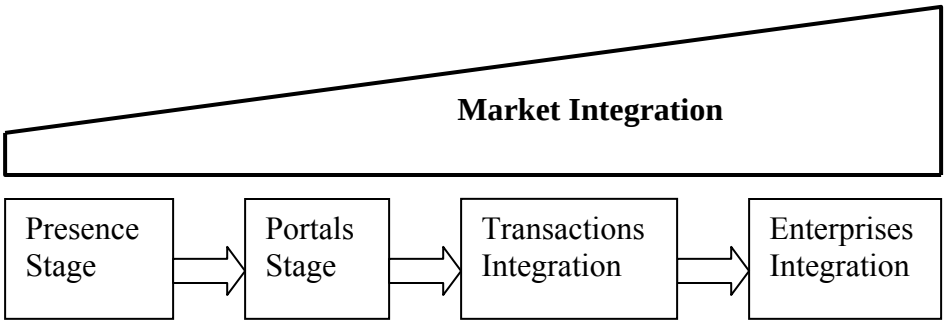

Figure 5. Hypothesis 1b

H1c: Market integration will fit into the model as a unique stage.

A distinctive feature that can be paralleled with key features of other stages, such as one-way communication, two-way communication, and money transactions, will distinguish

the market integration stage from other stages and identify a unique position in the model for it.

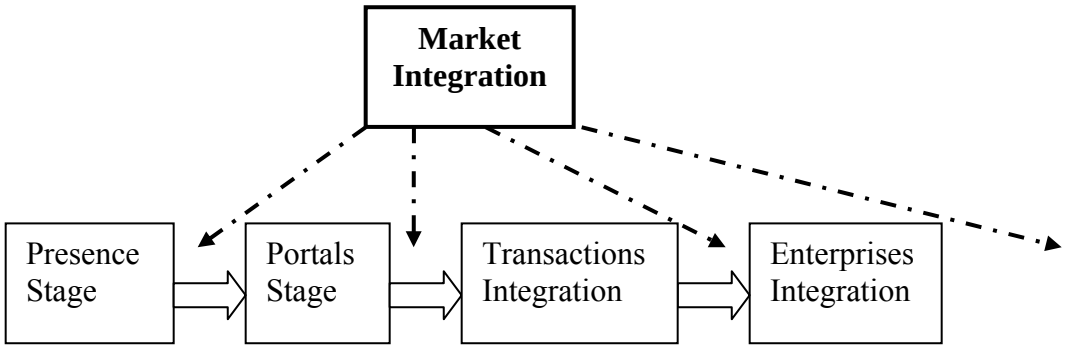

Figure 6. Hypothesis 1c

In this study, the transactions integration stage will be divided into indirect and direct transactions levels. An indirect transaction describes a complete Internet purchase using a credit card which is started on the winery's website but requires outside resources to complete. A direct transaction means that the same on-line purchase is handled entirely by the winery's website without using outside resources. The two categories have explicit differences. For example, an indirect transaction can be accomplished with the support of a third party, and resources used for this process come from outside firms. Direct transactions, on the other hand, require more internal resources, such as additional hardware, software and the necessary trained staff to run them.

Rao's article (Rao, Metts and Monge, 2003) mentions that, among 153 sample companies in Europe, 84 were positioned in the Transactions Integration Stage (Rao, Metts and Monge, 2003). If a majority of companies have been classified into only one category, the model's function of helping companies accurately identify their positions will be reduced.

The separate levels in the transactions integration stage can help a company identify its own and its competitors' positions more accurately.

H2: The transactions integration stage can be divided into indirect transactions and direct transactions levels.

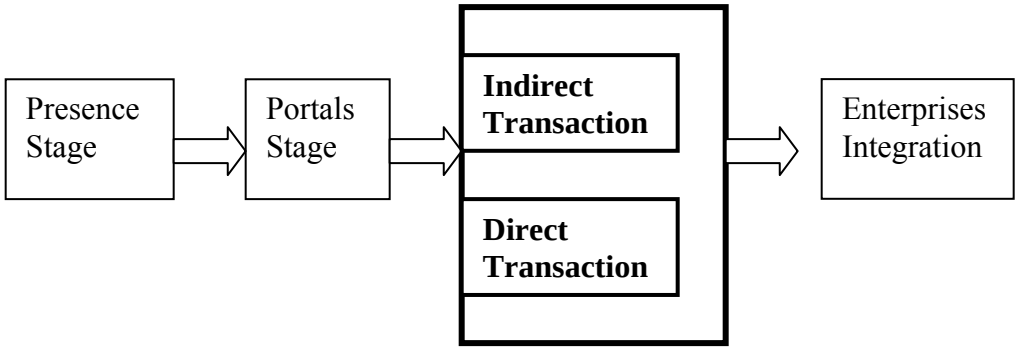

Figure 7. Hypothesis 2

Another research question in this study is to assess whether the content features on the website are equally distributed in each stage in Rao's model, or if some of them are more prominent in the early or later stages. To assess this, website content features will be examined. Following data collection and analysis, it should be possible to answer this question.

These hypotheses will be tested and the research question will be answered utilizing a content analysis of Canadian wineries' websites. This process is described in the next section.

5. Research Methodology

This research project will examine a revised website stage model within the context of Canadian wineries. The main purpose of this study will be to assess this revised model by mapping Canadian wineries' websites into each of the website stages. In this section, a brief introduction of the research design and procedures will be presented, followed by a detailed explanation of the content analysis method, and the email and telephone survey instruments used. Since the information on a winery's website might change frequently, software named Teleport Pro Version 1.29 has been used to download the entire websites of all 206 wineries at one point in time, and the information was saved to a local computer. By doing so, these winery websites can be analyzed as necessary for this study. In order to protect the wineries' copyright, all downloaded websites will be deleted as soon as this research has been completed.

- ***Research Design and Procedures***

The research design in this study is quantitative in nature. It is based upon a positivist perspective. Content analysis is the primary form of data collection here. In addition, short email and telephone surveys will be used for a small number of wineries to gather supplementary data. The winery website is the unit of analysis. All Canadian wineries with a website will be included in the research sample. Data will be collected from the wineries' websites and, to a limited extent, from the email and telephone surveys.

In this research, content analysis is used for the evaluation of website features. Canadian wineries' websites will be systematically analyzed and classified to see if Rao's model can be revised by incorporating the market integration stage. The content analysis method is proper for doing the present research for the following reasons. First, it can be used to conduct the census research within the context of the Canadian wineries' websites. This method allows a thorough analysis of all sample units. Surveys, which are constrained by the response rate, and interviews, which would be limited by time and expense, are both less suitable to conduct a census study than content analysis. Second, one of the limitations mentioned in Rao's article is that their study relied on self-reported data. Respondents to questionnaires and interviews might be trying to find out the purpose of the research and introduce personal bias in order to make their responses look good. Content analysis avoids this pitfall by getting objective information directly from the websites. Third, content analysis also helps the researcher to access information which web designers or other employees might not remember accurately.

Holsti (1969) provides a definition of content analysis as a technique employed to classify information into categories which is then used to make a prediction. As a systematic, objective and unobtrusive research method, content analysis can be used to analyze any human communication content and infer potential results from data in a certain context (Krippendorf, 2004). The Internet provides a broad content world to researchers and deserves scholars' attention in using content analysis to explore the web content (Neuendorf, 2002). Content analysis of websites has been widely used in previous research (e.g. Huizingh 2000; Perry and Bodkin 2000; Bucy et al., 1999; Ghose and Dou 1998). Ghose and Dou (1998) carried out a study of web content analyses, identified a

thorough list of variables and coded the business sites used. Bucy et al. (1999) use content analysis to assess the formal features of 496 websites and conclude that significant relationships between site traffic and page structure have been found in both the business domain and the educational domain. Perry and Bodkin (2000) conducted a content analysis to evaluate Fortune 100 company websites. Ellinger et al. (2003) carried out a content analytical assessment of motor carrier websites. Clearly, content analysis is a proper method to be used in this study. In addition, no previous studies have been found which analyze the content of Canadian winery websites. This author would like to fill this gap.

Content analysis is also a research technique for quantitative depiction of messages in communication (Berelson, 1952). This study will use quantitative content analysis because it is more interested in identifying whether some features are actually listed on the wineries websites than how the features have been demonstrated. Neuendorf (2002, p50.) presents a commonly used content analysis procedure which involves eight steps: theory introduction, conceptualizations, operationalizations, creation of the coding scheme, sampling, coding, assessing reliability and, finally, tabulation and reporting. The specific questions to be investigated in the content analysis were formulated to assess the revised website stage model. The quantitative content analysis approach in this study consists of formulating categories, identifying the existence of the web features, calculating the frequencies, percentages and rates, and subsequently describing the results. The author constructed a unique research process for this study, which includes seven steps, ranging from the compilation of a list of Canadian wineries, to the scale development for a SPSS statistic analysis. A summary of the research process follows.

- ***Summary of Research Process***

Step 1: A Canadian wineries list was prepared to identify the research sample.

Step 2: Content categories for all stages in the revised model were designed.

A majority of data was collected directly from each winery's website by using the content categories.

Step 3: A small sub-sample of Canadian wineries' websites was pre-tested to ensure that the content categories were properly defined and were measuring what they were supposed to measure.

Step 4: The wineries' websites were classified into the presence, portals and transactions integration stages.

Step 5: Enterprises integration survey. Email surveys were sent out to the wineries in the transactions integration stage. Non-respondents were then contacted via telephone. The data obtained from the previous step was used to identify the email survey subjects and the number of subjects. The responses were analyzed and used to identify the wineries in the enterprises integration stage.

Step 6: Market integration features were assessed for the wineries in each of the four stages.

Step 7: In the content analysis process, all website features, both functional and content features, are categorical variables. In order to carry on a statistical analysis by using multinomial logistic regression, ratio data are created for the independent variables.

Once the above-mentioned seven steps were implemented, data collected in the previous steps was analyzed using Multinomial Logistic Regression and Independent T-test in SPSS software. Related descriptive statistical results were also obtained.

Each of these steps will be addressed in turn.

5.1. Research Process Step One: Creating Winery List

A list of the names of Canadian wineries has been found on the Statistics Canada Paper Reports published before 1980, but there is no such list of names updated after 1980. The explanation provided by Statistics Canada is that it wishes to protect the wineries' privacy. Since no other resources include all Canadian wineries, a complete Canadian winery list has been developed for this research. The Internet and the search engine Google have been used as tools to compile this list. The sample for the study is derived from eight sources (see Table 5):

Table 5 The Sources of Canadian Wineries List

Source	Description of the source	Wineries listed
1) Canadian Yellow Page (www.yellow.ca)	Wineries list has been found under the Wineries classification on the Canada Yellow Page website.	644 companies are listed.
2) Canadian Vintners Association (CVA) (www.canadianvintners.com)	This is a non-profit organization whose members include such groups as the Wine Council of Ontario, and the British Columbia and the Canadian Wine Institute, which has been in existence for 60 years before entering the CVA. (Canadian Vintners Association Organization, 2005).	36 CVA members were found on this website.
3) VQA(www.vqaontario.com)	The Vintners Quality Alliance is widely recognized as a symbol of wine quality (VQA Ontario, 2005). Because Ontario is the main wine-producing area in Canada, it is important to include all Ontario VQA members in the research sample	All 79 Ontario VQA members are listed.
4) Wine Dining (www.winedining.net)	Wine Dining is a non-profit website.	It lists 90 wineries.
5) BCWINE.COM (www.bcwine.com).	BCWINE.COM is a non-profit website as well. 60 wineries have been found in three main wine-producing areas in BC: the Fraser Valley, Vancouver Island and the Okanagan Valley.	It lists 60 wineries.
6) Wines of Canada (www.winesofcanada.com)	Wines of Canada is a personal website designed and developed by Robert A. Bell. This website was chosen as a prime resource because Mr. Bell contacts all the wineries twice per year for updated information (Wines of Canada, 2005). Thus, the information used for this research is six months old or less.	It contains a list of names of 279 Canadian wineries in Ontario,
7) Canadian Winery Index (www.travelenvoy.com)	The Travel Envoy website includes a world winery index which has been categorized by countries and regions.	It lists 123 wineries in Canada section.
8) Canadian Wineries (www.canwine.com)	CANWINE is a platform for wine lovers to discuss wines made in Canada, especially the ones produced from Canadian grapes.	122 wineries are listed on this website.

After browsing the above-mentioned eight websites, the names of 1433 Canadian wineries were collected as a pool for selecting the final sample. Sample preparation included the following steps. First, duplicate wineries were deleted. Second, the wineries which appear in the Yellow Pages but are not listed anywhere in the other seven resources were identified for further assessment. The author examined each of these wineries with the use of Google. It turns out that these wineries describe themselves as wine shops, wine merchants, wine cellars, or wine stores on their own websites or on other web pages. Based on these definitions, the wine shops, wine merchants, and wine stores, which do not actually produce wine, were excluded from the sample pool. When this funneling process was completed, a list of 369 wineries remained. Again, Google was used to search each name on the list. An Internet advertisement or a simple introduction of the winery on another organization's website was not considered to be the winery's own website, and, therefore, was not included in the sample. This thorough search yielded 222 wineries which have been identified as owning a website. After excluding the websites under construction and all exclusively French websites, 206 wineries remained in the sample for this study. As an aside, this result could be considered a census of English-language Canadian wineries' websites.

5.2. Research Process Step two: Content Analysis

5.2.1. Creating and Defining Categories

It is critical to have well-defined categories and operational definitions in order to attain valid results from content analysis (Berelson 1952; Kolbe and Burnett 1991). Categories for content analysis should rely on a theory and the data from which they were derived

(Strauss, 1987). In this study, the initial development of categories came from the questions to be examined and from the categories listed in Rao's model. According to the revised website stage model, the categories include the following five stages: presence, portals, transactions integration, enterprises integration, and market integration. Each of the five website stages is a unique category with a group of features. Web features in the presence stage category disclose information about the one-way communication characteristics of the website. In the portals stage category, information about the product (in this case the wines) and ways to contact the producer through the website are given. Web features in the transactions stage supply information about the money transaction characteristics of the website. The enterprises integration stage gives information about the advanced management function integration characteristics of the website. The market integration stage, as its name implies, describes the marketing characteristics of a website. These features can be used to identify a website's stage within the revised model. The following section includes two parts. First, functional features for each website stage in the revised model will be introduced. Second, the website content features will be described.

5.2.1.1. Functional Features Classification

Since Rao's model is a reference model for this study, part of the content categories will be adopted from their research. The descriptors for each stage have been listed as follows:

1. Presence

The presence stage is the first step to e-commerce for most firms (Rao, Metts and Monge, 2003). In this stage, information flows from the website to the Internet user in a single direction (Figure 8). The following will be considered when categorizing a winery into the presence stage:

1) One-way communication (Window to the web)

Rao's interpretation of one-way communication is that a company has a website and uses it to provide information about its products, services and avenues for contact to potential customers/suppliers in a static manner.

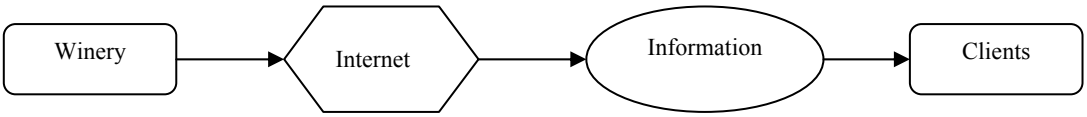

Figure 8. One way communication

Presenting a company brochure or product on the Internet is the initial action that most businesses would like to take (Timmers, 2000).

2) Content

Rao did not provide an explanation of content. In this study, content comprises diverse information that can be conveyed to customers/suppliers through web pages. It is also an effective online demonstration of a product or service (Jeffcoate et at, 2000).

3) No Integration

Rao describes this concept in that the presence stage website does not integrate any internal and external processes because its main objective is to catch the attention of

potential users (O'Keefe, O'Connor and Kung, 1998).

4) E-mail

Rao did not mention why e-mail has been listed as one of the presence stage features. This author's interpretation of e-mail is that an e-mail address may be listed on a website as an important piece of contact information.

2. **Portals**

In this stage, an organization not only displays information on its website, but also provides the opportunity to communicate with participants via the Internet. Information flows in both directions between a company and its website browsers. Figure 9 clearly demonstrates an information flow circle which is created by the two-way communication. The following items help to create such a circle. Businesses can obtain feedback from Internet users either by actively collecting information or passively waiting for it.

1) Two-way communication

Rao's interpretation of two-way communication is that a company's website may be used to provide product, service and contact information to potential customers/suppliers and, at the same time, customers/suppliers can submit feedback to the company via its website by way of online order forms, contact forms, etc. (Rao, Metts and Monge, 2003). This stage could also provide a search function for customers (Rao, Metts and Monge, 2003). It demonstrates a higher technology usage than the presence stage.

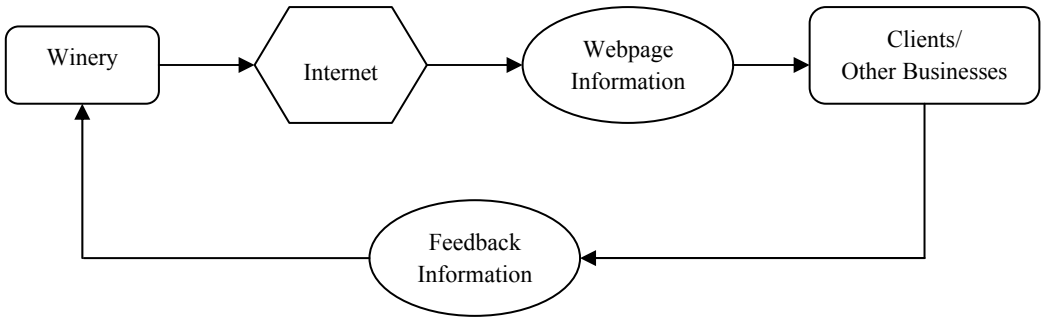

Figure 9. Two way communication

2) Cookies

Rao did not provide an explanation of cookies. This author adopts the definition of cookies from Webster's dictionary: "A small file or part of a file stored on a World Wide Web user's computer, created and subsequently read by a Website server, and containing personal information (as a user identification code, customized preferences, or a record of pages visited)." (Merriam-Webster Online Dictionary, 2005, www.merriam-webster.com/)

3) Profiles

Rao also did not provide an explanation of profiles. In this study, a user profile may contain information about a user's interaction with the company's website. If the company could set its own cookie, it would be possible to create database profiles that integrate information about users' behavior on a website and their interaction with the corresponding webpage or content. Based on a profiling system, a company could obtain valuable information about consumer behavior and use it to guide future marketing efforts.

4) E-mail

Rao did not provide an explanation of E-mail. In this study, e-mail in this stage is understood to be different from that in the presence stage where it is just a piece of information listed on a company's website. Email here refers to an email hyperlink, which is one of the two-way communication tools available to exchange information between a company and its customers/suppliers

5) Order Placing

While Rao did not provide an explanation of order placing, it is understood here that customers can find product and pricing information on the website and place orders through the Internet by using an online form or email links built into the company's website.

6) No$ Transactions (Offline Transactions)

Rao did not provide an explanation of No$ transactions. In this context, it means that although customers could place orders through telephone, fax, mail, email or online forms, no money has been transacted through a winery's website. Websites without an online payment function will be considered to be No$ transactions.

3. Transactions Integration

Websites in this stage have more functions than those in the presence and portals stages. One of the functions is money transactions. Customers can buy the products and pay the money either from the vendor's website directly or the third party's website. Money will be electronically transferred from the customers to the firms via Internet. Money transaction is the benchmark for this stage. Figure 10 evidently shows the money flow

circle, which is created by the money transactions process. Businesses can obtain money from Internet users either by their own online payment system or that of a third party's website.

1) Money Transactions

Rao did not provide an explanation of money transactions. This author's interpretation is that when customers' order products online, all money transactions will be performed electronically through a winery's website or a third party's website. No sales representative needs to be involved in the customers' online purchasing process. The customers can choose goods or services and pay for them on the Internet.

Two types of money transactions have been mentioned in Rao's article (Rao, Metts and Monge, 2003). Some companies' websites incorporate the money transactions function into their own website. Others fulfilled such function by outsourcing it to the third party. To implement direct transactions require more internal resources, such as additional hardware, software and the necessary trained staff, than outsource it to the third party. In this study the transaction integration stage has been separated into two levels, indirect and direct money transactions, thus creating a hypothesis for this study, which will be tested using the content analysis method.

- ***Indirect money transactions***

For this type of transaction, a company needs an outside resource to provide an online payment capability. In this research, wineries cooperate with a third party e-commerce website to implement this function totally outside the company's website but accessible via a hyperlink.

- ***Direct money transactions***

A direct money transaction allows online shopping and payments with a credit card without interacting with the sales representative. In this research, if a customer can finish the entire shopping process through the winery's website, it will be considered as having the direct money transactions feature.

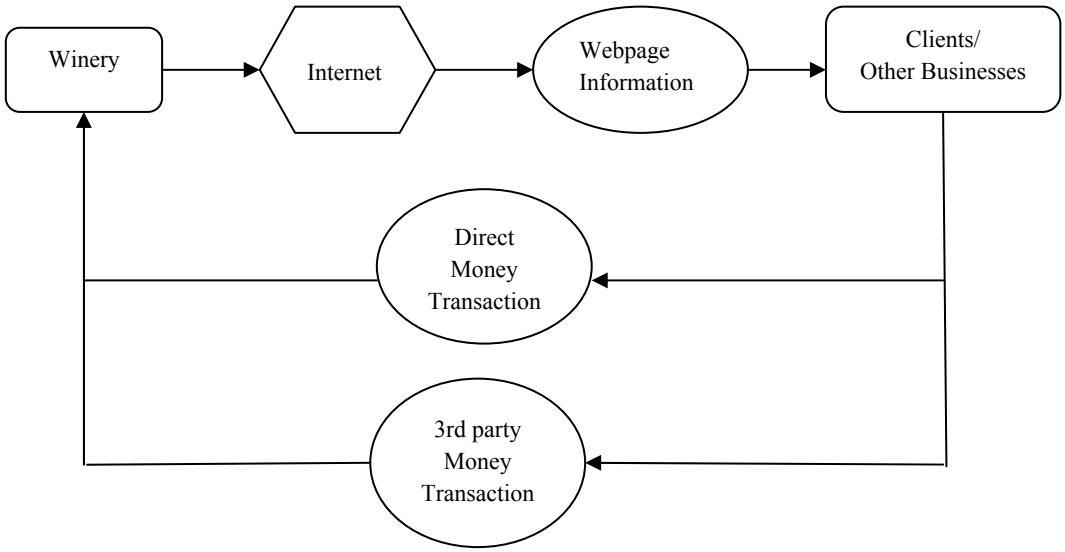

Figure 10. Money Transactions

2) B2B/B2C

The meaning of B2B/B2C, according to Rao, is that there are both two-way communications and money transactions between businesses (B2B) and/or between the business and its customers (B2C).

3) Communities

Rao's states that communities refer to groups where participants can exchange relevant information with each other.

4) E-Marketplaces

Rao did not provide an explanation of e-marketplaces but this author sees e-marketplaces as virtual platforms that allow buyers and vendors to get together, exchange information and execute contracts to purchase products or services (Jagannathan, Srinivasan, and Kalman, 2002). In e-marketplaces the categories of suppliers have been listed and relevant online functions, such as product searches, buying, selling, and payment options, have been offered to facilitate online trading in a secure environment.

5) Auctions

Rao describes auctions as electronic functions where sellers follow traditional price setting and order implementation processes to provide products or services to buyers on the Internet. One major example would be e-bay.

6) 3rd Party e-marketplaces

Rao's interpretation of 3rd party e-marketplaces is that of a third party platform in which the categories of suppliers have been listed and correspondent online functions, such as product search, buying, selling, and payment, have been offered to facilitate the online trade in a secure environment. The 3rd party will also take responsibility for maintaining a relatively safe place for both buyers and sellers.

7) Low level Collaboration

Rao states that low level collaboration indicates the sharing of small amounts of information between partners and few tasks will have been delegated to other agents. The company does not work cooperatively with many other companies.

4. Enterprises Integration

This stage reached the highest level in Rao's model. Websites in this stage fully integrate advanced functions, such as customer relationship management (CRM), value chain management (VCM), supply chain management (SCM), and e-business system. The successful incorporation of traditional business process and modern e-business process is accomplished by implementing these functions on the website. Companies owning websites in this stage possess competent employees, highly developed technology, and integrated business process.

1) Full Integration

In Rao's view, full integration combines B2B, B2C and value chain management through e-commerce systems.

2) E2E

While Rao did not explain E2E, for this study E2E is described as an end-to-end supply chain management that will significantly reduce the costs, such as communication and transportation costs, between companies and clients through e-commerce systems.

3) E-Business

Lacking an explanation of e-business by Rao, this author borrows the definition of e-business from the literature: “E-business is the complex fusion of business process, enterprise applications, and organizational structure necessary to create a high-performance business model.”(Kalakota and Robinson, 2000).

4) OldLine=Online

Again, Rao did not provide an explanation. This author’s interpretation is that the old-line=online business is the combination of traditional business and Internet technology in the e-commerce environment.

5) E-Business + CRM + SCM

According to Rao, E-Business + CRM + SCM is a level of integration which utilizes e-commerce systems to manage customer relationships and the supply chain.

6) Value Chain Integration

Rao did not provide an interpretation of value chain integration, so it should be understood that the value chain integrates the complete spectrum of producers and their support communities, from raw material origins to final consumption, by e-commerce systems.

7) High Level Collaborations

Rao did not provide an explanation of high level collaborations. For this research, high level collaboration indicates relatively large amounts of information have been shared between partners and more tasks have been delegated to other agents. The company works cooperatively with many other organizations.

The enterprises integration stage is an ideal level that is, unfortunately, difficult to achieve for the following reasons. First, it requires high level technology that is not viable at present, so technical issues are the main obstacles for companies to reach this stage (Rao, Metts and Monge, 2003). Second, over-whelming integration is another barrier, because the complex and redundant integrating functions could hardly be utilized by SMEs (Rao, Metts and Monge, 2003).

5. Market Integration

Previous mention of cluster theory and the Californian Wine Cluster explain why wineries maintain links to food and tourism clusters. Therefore, content features such as Restaurant and Tour Agency are created under the market integration category for assessing the wineries' websites. However, Porter (1998d) stated that it is difficult to include all cluster units in one diagram; therefore, some entities that have linkages with wineries might be ignored or excluded. This study hopes to discover additional networks to those listed by Porter. Apart from what Porter listed in his research, this author added cluster organizations, such as Associations, Hotel and Vehicle services, as complementary items. These items were discovered by checking several wineries' websites in step two of the research process: pre-testing the categories and rules of operationalization. This research will establish whether wineries also have linkages to them. Features developed for the internal and external market integration categories are listed in the following Tables 6 and 7. Some of the features, such as tour agency and restaurant, are adopted from the California wine cluster research conducted by Porter (1998c), which described the relationships found among wineries and the tourism and food clusters. Other features are summarized from the information listed in wineries' homepages.

Table 6 Internal market integration List

Internal market integration	*Explanation*
1) Tour activity	This feature means that the winery itself offers some tour activities.
2) Food provision	Here, a winery operates its own restaurant on the premises.
3) Wine tasting	The possibility to taste its wines exists at the winery.
4) Gift shop	In this category, the winery operates its own gift shop where more than wine products are offered for direct sale.

Table 7 External market integration List

External market integration	*Explanation*
1) Restaurant	Here, restaurants in the vicinity of the winery are mentioned on its website and may be accessed via hyperlinks. However, they are not owned or operated by the winery itself.
2) Tour agency	This feature provides information about wine tours on the winery's website but these tour agencies are not owned or operated by the winery.
3) Associations	Some wineries belong to one or more associations, such as wine associations or tourism associations. This information is usually available via hyperlink on winery websites.
4) Hotel	This feature provides links to close-by accommodations, such as hotels, inns or Bed & Breakfast establishments, on the winery website but they are not owned or operated by the winery.
5) Vehicle services	Again, information is listed about transportation companies, such as airlines, car rentals, etc., to provide convenient access to the winery, without these companies being owned or operated by the winery.

5.2.1.2. Content Features Classification

This study asks a research question of whether the content features on the website are equally distributed in each stage in Rao's model, or if some of them are more prominent in the early or later stages for the following reasons.

First, according to Davidson (2002), questions such as "how can I use the Web to help my business, what should I put on a Web site, and how do I go about implementing a Web presence?"(p.1) were asked by government organizations like the South Australian Centre for Innovation, Business and Manufacturing. In order to find the right answers, not only the problems but also the real situations must be properly understood. This research will investigate the real situation of the Canadian wineries' websites.

Second, web content as one of the essential factors of website design will affect a consumer's attitude towards the company (Lii, Lim and Tseng, 2004). The present study is designed to examine a technology model by combining marketing perspectives. Thus, including the web content analysis from the marketing and consumers' point of view will provide value-added results to this research.

Third, web content will, to some extent, represent the Internet-based commercial environment in a specific industry or country. As mentioned before, e-readiness in a country can be measured by six distinctive categories of indicators: Connectivity and technology infrastructure, Business environment, Consumer and business adoption, Legal and policy environment, Social and cultural environment, and Supporting e-services (The

Economist Intelligence Unit e-readiness rankings, 2002). Content features in this study will demonstrate the characteristics of some indicators. For instance, content features Events, Newsletters, Awards exhibit characteristic of Consumer and business adoption. Legal and policy environment are represented by content features of Legal Statement, Privacy Statement and Copyright Statement.

General Purpose Technology (GPT) theory indicates that the same technology does not induce the same business implication for organizations in all places (Forman, Goldfarb and Greenstein, 2005). The following information can be implemented by the same Internet technology, namely, a web page. However, this technology did not lead to the same commercial experience regarding different information content. The different information displayed in different wineries' websites may play different roles in the business process, and these phenomena can be explained by the GPT theory. After checking the main web pages of several wineries, this author summarized the following essential content features found directly on wineries' homepages (Table 7). Some of these features had already been mentioned in previous studies. For instance, About the business, Map, and About wine were found in Sellitto, Wenn and Burgess's study (2003) while Davidson's research (2002) included A Map, Privacy Statement, and Electronic Newsletters.

Table 8 Content Features List

Content Features	Explanation
1) About Us	This is usually an introduction of the company, its vineyards, and/or employees.
2) About Wine	Information about wines and wine-related services may be found in this category.
3) Location or Map	This feature provides a map and/or directions to the winery.
4) Awards	Industry-related medals, trophies and certificates are normally proudly displayed to confirm the winery's achievements. Such awards are a public acknowledgment of the company's products, meant to entice potential customers.
5) Events	This feature refers to a set of activities conducted by the winery.
6) Newsletters	Often, a winery will solicit subscribers to Internet newsletters which is sent regularly to interested parties.
7) Disclosures	The disclosures mentioned here include the legal statement, privacy statement and copyright provisions generally found on web pages. • Legal Statement • Privacy Statement • Copyright Statement

5.2.2. Operationalization

Based on the nature of this study, the following categories and the features under the correspondent category will be selected to analyze a winery's website. Content analysis will be used to examine each website. The operational process includes three steps. First, the author will review the reference model related features, which are under the four website stage categories, and identify the stage of the website. Second, the market integration category will be assessed. Third, other content features will be investigated. The percentage of features in each content category will be also reported.

Since market integration is a stage which is to be added into Rao's model, an operationalization of the internal and external market integration will be established. Internal market integration can be evaluated by searching information about business activities other than the wine business on a winery's website. An assessment of external market integration can be done by examining contents about other organizations or hyperlinks to different organizations on a winery's website.

This research will utilize a key feature of each stage to classify winery websites into stages in the revised model. Websites can be located in different stages by means of the benchmark for each stage, such as **one-way communication** for the presence stage, **two-way communication** for the portals stage, **money transactions** for the transactions integration stage, and **full integration** for the enterprises integration, **incorporation of business activities other than selling wines** for the internal market integration stage, and finally, **relations with other organizations** for the external market integration stage. Features that could be used to represent these benchmarks are listed below. Data collected

from websites will be used to place a specific winery's website into the presence stage, the portals stage, and the transactions integration stage. Because the functional features under the enterprises integration category cannot be directly obtained from a website, this author will use a survey to acquire additional information which will then be utilized to distinguish the wineries in the enterprises integration stage from those in the transactions integration stage.

Content categories, features and operationalizations for each website stage in the revised model are described here. Tables 9 to 13 will describe the rules of operationalization for the four stages in Rao's model and also the new stage, market integration, to be tested in this study. These rules of operationalization will be utilized in the coding process of the content analysis.

Table 9 Operationalization of Presence

Presence	Operationalization of Presence
1) One way communication	As long as a winery has its own website, it will be automatically put into the presence stage. If there is no two-way communication and no money transactions featured on the website, it will be mapped into the presence stage.
2) Content	
3) E-mail	

Table 10 Operationalization of Portals

Portals	Operationalization of Portals
1) Two-Way Communication	If information can be exchanged between a winery and customers/businesses through the winery's website, and no money transactions feature has been integrated, the website will be classified into the portals stage.
2) E-mail	
3) Order Placing	

Table 11 Operationalization of Transactions Integration

Transactions Integration	Operationalization of Transactions Integration
1) Indirect Money Transactions	If online payment function has been incorporated into the winery's website, or the winery uses a third party's website to fulfill the online payment function, and no full enterprises integration features are present, the website will be classified into the transactions integration stage.
2) Direct Money Transactions	
3) B2B/B2C	
4) Communities	
5) E-Marketplaces	
6) Auctions	
7) Third Party e-marketplaces	

Table 12 Operationalization of Enterprises Integration

Enterprises Integration	Operationalization of Enterprises Integration
1) Full Integration	If the winery's website, which already incorporates online payment function within its own website, has implemented full enterprises integration features, the website will be classified into such. If such a website only has one of the above-mentioned functions, it will be classified as partial enterprises integration. Since this information is not necessarily evident on the website, a survey will be used to obtain the information, as discussed in a later section.
2) Customer Relationship Management Integration	
3) Supply Chain Management Integration	
4) Value Chain Management Integration	
5) High Level Collaborations	

Table 13 Operationalization of Market Integration

Internal Market Integration	**Operationalization of Internal Market Integration**
1) Tour activity	If the winery's website incorporates business activities other than selling wines, it will be mapped into the internal market integration stage.
2) Food provision	
3) Wine tasting	
4) Gift shop	
External Market Integration	**Operationalization of External Market Integration**
1) Tour agency	If the winery's website incorporates business activities other than selling wines, or demonstrates relations with other organizations, it will be mapped into the market integration stage.
2) Restaurant	
3) Associations	
4) Hotel	
5) Transportation tool	

5.2.3. Coding Schemes

A premium content analysis design should have a clear coding scheme to guide the coders (Strauss, 1987). It is important that significantly different information can be coded into distinct categories, and similar information can be consistently coded into the same category. Based on the definitions of categories and operationalizations mentioned earlier, a coding scheme has been developed for this content analysis. It includes these coding categories and the rules that will be used to code each website. Because no existing classifications can be used, an original coding form and a coding book for analyzing the data have been developed for this study, in order to meaningfully characterize a winery's website. The coding form contains all website features classified into distinctive categories. Within each category there are a number of codes which relate to the items on such a website. For example, tour activity, food provision, and gift shop are codes within the internal market integration category. As well, a codebook, which includes all the coding rules, has been constructed for use in the study. The meaning of each variable and the way of measuring it has been clearly explained. A coding form is used in conjunction with the codebook in the content analysis process.

5.2.4. Selecting the Unit of Analysis

The unit of analysis is a specific unit of information to be classified into a correspondent category (Holsti, 1969). In this research the winery website is the unit of analysis. A Canadian winery with a website is chosen to be the sample unit so that it will be consistent with the nature of the research question.

5.3. Research Process Step Three: pre-testing the categories and rules of operationalization

The overall aim of this pre-test is to develop a valid and reliable instrument that measures an individual website within the context of Canadian wineries. In order to improve the construct validity and quality of the content categories, a pre-test was done before the final content categories were used to code all wineries' websites. There are two main reasons for conducting such a pre-test. First, it helps to ensure that the content categories are properly defined and are measuring what they are supposed to measure. Second, some important features that may have been overlooked in the initial categories could be discovered in the pre-test process.

The pre-test involved the coding of 20 winery websites from the sample of 206. In order to reduce any systematic error in the category, wineries were selected from each wine-producing province as follows: six from Ontario, six from British Columbia and one each from Alberta, Manitoba, New Brunswick, Newfoundland and Labrador, Nova Scotia, Prince Edward Island, Quebec and Saskatchewan. As expected, several important features and categories were discovered and added into the previous content categories, and the findings are listed below.

First, some wineries provide their business hours on the website. Since many wineries operate seasonally, notifying customers of their work times is a marketing feature which demonstrates customer care. Second, information about wine sales agents is displayed on some websites. This information could help a winery to extend its wine sales market to

different provinces or even different countries, as one of the essential functions of the Internet is to extend business to remote areas and break time and distance constraints as a result. Wineries without such information on their websites might benefit from adding it. Third, web pages in different languages have been found on some winery websites, such as English, French, Chinese and Japanese. Naturally, this might help a winery to extend its market by conveying its information to a larger potential customer base. Fourth, some websites include site maps which are user-friendly functions for guiding viewers through the website. This feature also demonstrates the interactivity of a winery and its customers. Fifth, vineyard photo albums, online virtual tours, dynamic pictures, background music and visitor counters were offered on some websites. From a technological point of view, they are all simple functions that could be easily implemented, yet these features might benefit wineries by impressing their customers. The newly discovered features mentioned above have been used to revise the initial content categories.

5.3.1. Revising Categories and Rules of Operationalization

Some features discovered in the pre-test process have been classified into the relevant categories while others have led to the development of new categories. Correspondent changes have been made in the rules of operationalization.

5.3.1.1. Revised Functional Features Classification

After pre-testing, 37 features have been classified into the following six stage categories: Presence, Portals, Transactions Integration, Enterprises Integration, Internal Market Integration, and External Market Integration. The revised categories are listed in Tables 14 and 15 below. In Table 14, all functional features that will be used for classifying the

website into the four stages in Rao's model, are summarized. Five items were used to identify a website in the presence stage, while six are listed for the portals stage. Transactions integration has nine items that can be used to recognize this stage and measure its characteristics, and enterprises integration has four. Table 14 includes all thirteen functional features that will facilitate the identification of the website's stage of market integration. There are five items for assessing internal market integration and eight for external market integration.

Table 14 Revised Functional Features for Four Website Stages

1. Presence	2. Portals	3. Transactions Integration	4. Enterprises Integration
1) Information about the winery and the vineyard. 2) Information about wine products or services. 3) Contact information. 4) Email address included on the website 5) One-way communication	1) Information about placing of orders 2) Online feedback function 3) Search function 4) Site map or site index 5) Email with hyperlink 6) Two-way communication	1) Direct money transactions 2) Indirect money transactions through third party website 3) Overall Money transactions 4) Business to Business 5) Business to Customers 6) Communities 7) E-Marketplace 8) Hyperlinks to or content about 3rd party E-marketplace 9) E-auction	1) Integrate Customer Relationship Management 2) Integrate Supply Chain Management 3) Integrate Value Chain Management 4) High Level Collaborations

Table 15 Revised Functional Features for Market Integration

Market Integration	
• ***Internal Market Integration***	• ***External Market Integration***
1) In-house Tour activities provided by wineries	1) Hyperlinks point to or content about Tour agencies held by other companies
2) In-house Wine tasting provided by wineries	2) Hyperlinks point to or content about Restaurants held by other companies
3) In-house Food services provided by wineries	3) Hyperlinks point to or content about Wine shops held by other companies
4) In-house Wine shop provided by wineries	4) Hyperlinks point to or content about Accommodations provided by other companies
5) In-house Accommodation provided by wineries	5) Hyperlinks point to or content about Associations
	6) Hyperlinks point to or content about Website design companies
	7) Hyperlinks point to or content about Transportation service providers
	8) Hyperlinks point to or content about organizations other than those mentioned above

5.3.1.2. Revised Content Features Classification

New categories have been developed for the content features for a total of 19 web features. They have been classified into four categories, Marketing Functions (e.g. advertising, customer care, and marketing extension), Technological Functions, Legal & Social Awareness and Winery Characteristics. The revised categories appear in Table 16. Table 16 includes nine content features for assessing marketing functions, and five for evaluating technological functions. Legal & social awareness features include legal notice, copyright statement and privacy statement. These features will be used to assess Legal & social awareness characteristics during the content analysis process. Since the winery characteristics are just the complementary content features for this study, only two items have been created for this category, family-owned and languages.

Table 16 Revised Content Categories List

Marketing Functions	Technological Functions	Legal & Social Awareness	Winery Characteristics
1) Newsletters 2) Press Releases 3) Awards Won by the Wines 4) Toll-free contact capability 5) Business Hours 6) Customized Wine Labels 7) Tasting Notes & Recipes 8) Map & Location 9) Events held by winery	1) Photo Album & Gallery 2) Virtual Tour 3) Background Music 4) Online Visitor Counter 5) Dynamic Pictures & Flash Effects & Moving Pictures or Words	1) Website Copyright Statement 2) Legal Notice 3) Privacy Statement	1) Family-owned business or not 2) Languages which have been used on the website

The newly organized categories and the features under each category will be utilized to carry out the content analysis of the winery's website.

5.3.1.3. Revised Rules of Operationalization

If a winery only has an email hyperlink feature and nothing else in the portals category, it will be classified into the presence stage. If a winery does not show a money transaction feature, even if it demonstrates other features in the transactions integration category, it will be classified into the portals stage. If a winery does not have a direct money transactions feature, even if there are features in the enterprises integration category, it will still be classified into the transactions integration stage.

Based on the revised content categories and rules of operationalization, a new coding form and codebook have been created. The complete list of the codes, with concrete examples to explain each code, and the coding rules are included in Appendix D.

5.4. Research Process Step Four: Coding the Data

Website studies should clarify to what extent the websites have been analyzed, i.e., has only the home page been assessed or was the entire website evaluated (McMillan, 2000). Although some studies choose to analyze just the home page of a website (Astroff, 2001; Paul, 2001; Papacharissi, 2002), this research will analyze the complete website of each sample unit. This author believes that the entire assessment of a winery website will provide a more accurate judgment of its website stage and characteristics. The whole

website, including all web pages, all content listed on the website and all hyperlinks are assessed. However, the content analysis scope does not exceed the wineries' main root address. Hyperlinks listed on a winery website will not be used to trace further information. One type of computer with a 15-inch monitor, Explore 6.0 browser, and high speed Internet connection has been used during the whole coding process in order to control the environment variable.

During this process, if a winery has one website but owns branches in different places, the website will be considered as one sample unit. The location listed on the website will be used to identify the province in which the winery is located. If information about more than one location is found, the headquarters location will be selected. Should a large winery have more than one website for its sub-organizations, each website will be considered as an independent sample. The author coded 49 items from each of the 206 winery websites in accordance with the coding forms and code book. A data collection form has been designed to record the data, write down notes and comments, and track records in an Excel spreadsheet (see Appendix E). This data collection form proved to be useful for conducting the content analysis and encouraged detailed examination of each website.

5.4.1. Assessing Reliability

Inter-coder reliability has been defined as the extent to which two or more coders reach agreement on the coding content when they code data independently (Holsti, 1969). It is a vital component of content analysis and it has been widely used to measure the research

quality as a typical criterion (Kolbe and Burnett, 1991). Content analysis is meaningless without assessing reliability because its aim is to categorize and record objective information (Neuendorf, 2002). The more disagreement that exists between coders, the weaker the research results; low reliability suggests shortcomings of the study, such as unclear categories, definitions and poor training (Kolbe and Burnett, 1991).

Properly created second coder reliability helps to assure that the data and its interpretation is valid and accurate. One undergraduate student majoring in management at a Canadian university was chosen as the second coder. This was a native English speaker who has been working as a research assistant.

In order to familiarize the second coder with the nature of the web features, the coding forms, coding rules, coding procedure, and extensive training were provided by the author. Each web feature listed in the coding form was explained, demonstrating each one by showing a real example of a winery's website on a laptop computer, and asking the second coder to practice the coding on some web features. The training lasted until the second coder fully understood all web features on the coding forms and knew how to code the data by referring to the codebook.

In order to meet the criteria of a systematic random sampling, this author selected every 5th winery website from the sample of 206 to create a sub-sample for the second coder. A sub-sample of 42 websites (20% of the pool) was prepared for the second coder, and was subsequently coded independently, to assess reliability.

5.5. Research Process Step Five: Enterprises Integration Survey

The enterprises integration stage in the website stage model included advanced and complicated technological functions which were not identifiable by assessing the website. Most of these functions were implemented and used by the winery's own employees and thus not accessible by customers. In order to accurately classify the website into each stage, an email survey with six short questions was devised. The intention of the email survey was twofold. First, the response should have clarified whether the website contains a direct money transactions feature. Second, it would be possible to distinguish the websites in the enterprises integration stage from those in the transactions integration stage.

Following the content analysis, the 206 websites were classified into the first three website stages, i.e. the presence, portals and transactions integration stages. The wineries which reached the transactions integration stage comprised the sample for the email survey.

The email survey was approved by The Faculty of Management Research and Ethics Committee at The University of Lethbridge. The questions used were as follows:

1. Does your company's website support direct online payment by allowing customers to use a credit card without interacting with your sales representative?

2. Does your company's website incorporate Customer Relationship Management (CRM) tools? (CRM: manage customer relationships by collecting customer information, sending product information to customers or collecting customer feedback.)

3. Does your company's website incorporate Supply Chain Management (SCM) tools? (SCM: improving how you find raw production components, manufacturers and distributors.)

4. Does your company's website incorporate Value Chain Management (VCM) tools? (VCM: deliver maximum value to the end user for the least possible total cost.)

5. Does your company use your website to work with other companies?

6. Does your company's website include any other advanced management and/or planning functions, besides those listed above?

Unfortunately, the email response rate was very low, so this survey was re-administrated via telephone, resulting in a final satisfactory response rate.

5.6. Research Process Step Six: Market Integration

Based on the revised market integration features obtained after the pre-test, these features were assessed using the following five items for internal and eight items for external market integration (Table 17).

Table 17 Revised Functional Features for Market Integration

Market Integration	
• ***Internal Market Integration***	• ***External Market Integration***
1) In-house Tour activities provided by wineries	1) Hyperlinks point to or content about Tour agencies held by other companies
2) In-house Wine tasting provided by wineries	2) Hyperlinks point to or content about Restaurants held by other companies
3) In-house Food services provided by wineries	3) Hyperlinks point to or content about Wine shops held by other companies
4) In-house Wine shop provided by wineries	4) Hyperlinks point to or content about Accommodations provided by other companies
5) In-house Accommodation provided by wineries	5) Hyperlinks point to or content about Associations
	6) Hyperlinks point to or content about Website design companies
	7) Hyperlinks point to or content about Transportation service providers
	8) Hyperlinks point to or content about organizations other than those mentioned above

5.7. Research Process Step Seven: Developing Scales

In the content analysis process, all website features, both functional and content features, are categorical variables. Most of them were coded into dichotomous values, Yes or No. In order to carry on a statistical analysis by using multinomial logistic regression, ratio data are needed for the independent variables. The ratio scales are created from correspondent dichotomous variables. For instance**,** internal market integration includes five categorical variables, such as tour activities, wine tasting, food services, wine shop, and accommodation. These categorical variables are calculated into a ratio variable. If a website has three of these features, then the sum of internal market integration variable will be filled with three.

In this study, website stage was the dependent variable. The independent variables included internal market integration, external market integration, technology functions, marketing functions and legal and social awareness. Five functional web features have been used for assessing internal market integration, thus a 0 to 5, 6-point ratio scale was created for this variable. In the same way, external market integration included eight functional features, thus a 0 to 8, 9-point ratio scales was established for it. Nine content features were used for assessing marketing functions; therefore, a 0 to 9, 10-point ratio scale was constructed. For the technology functions, five content web features have been used for assessing it, thus a 0 to 5, 6-point ratio scale was created for this variable. Three content features were used for assessing legal and social awareness; therefore, a 0 to 3, 4-point ratio scale was constructed. These scales were used in the regression model to predict the dependent variable, namely, website stage.

6. Results

The results are discussed in four parts. First, an overall websites summary is included. Second, the Canadian wineries website distribution by website stages and by province is described. Third, the outcomes of the hypotheses testing are given. Fourth, descriptive statistics relating to marketing functions, technological functions, and the legal & social awareness category are presented.

6.1. General Information Summary

This study employed a complete list of Canadian wineries (see Appendix A); 369 Canadian wineries were found in a thorough online search. Of these, 222 wineries had websites, and 147 of them did not. The rate of website adoption among Canadian wineries was 60%. Six winery websites were under construction, and ten sites used French only. These 16 websites were excluded from this study. The actual research sample for this study included 206 Canadian winery websites.

6.2. Canadian Wineries Website Distribution

Table 18 shows the distribution of the 206 Canadian winery websites. Wineries with websites were found in ten provinces, with Ontario having the highest rate at 49.5%, followed by British Columbia at 40.3%, and Nova Scotia and Quebec at 2.9% each. Alberta, Manitoba, New Brunswick, Prince Edward Island and Saskatchewan each had only one winery with a website. Wineries in Ontario and British Columbia accounted for 89.8% of the sample units in this study. No wineries were found in the Northwest

Territories, Nunavut and the Yukon, probably because these areas are too cold to grow grapes.

Table 18 Canadian Wineries by Province

Province		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Alberta	1	.5	.5	.5
	British Columbia	83	40.3	40.3	40.8
	Manitoba	1	.5	.5	41.3
	New Brunswick	1	.5	.5	41.7
	Newfoundland and Labrador	4	1.9	1.9	43.7
	Nova Scotia	6	2.9	2.9	46.6
	Ontario	102	49.5	49.5	96.1
	Prince Edward Island	1	.5	.5	96.6
	Quebec	6	2.9	2.9	99.5
	Saskatchewan	1	.5	.5	100.0
	Total	206	100.0	100.0	

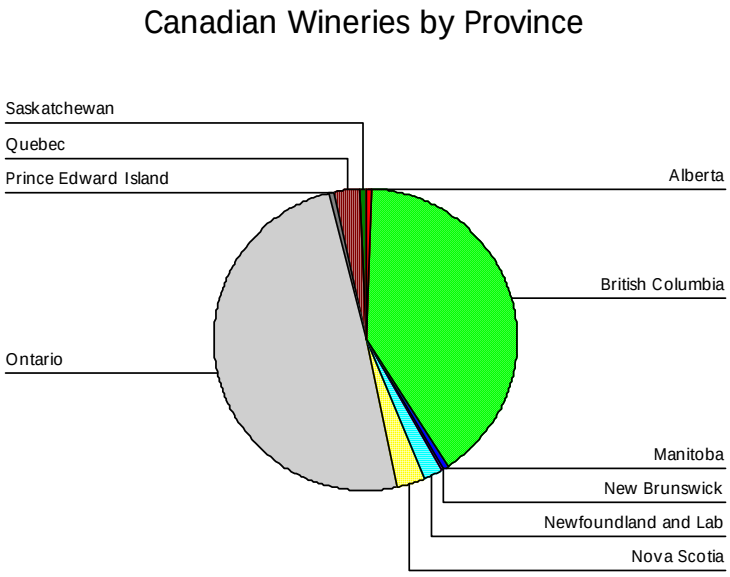

Figure 11. Canadian Wineries by Province

6.3. Canadian Wineries Website Classification

Content Analysis Results

A quantitative content analysis of a sample of 206 Canadian wineries was conducted between January and July, 2005. The results are described below.

Three variables were used for describing the nature of the website: the winery's name, location by province and its web address. Each website was then thoroughly examined, and 49 web features were directly coded into categorical variables in an SPSS file. The 49 variables can be seen from the Appendix D. Five string-type variables were used for recording special characteristics. They are not included in the present coding scheme, but will be discussed later. After the 54 items had been collected, nine categorical variables with more than two levels were recoded into nine different dichotomous variables with two levels, Yes and No, for further data analysis. The data collected was also used to compute sixteen ratio variables in order to conduct descriptive statistical analysis. Following this process, 83 variables in the SPSS dataset had been filled. Based on these data, all websites were classifiable into three website stages: the presence, portals and transactions integration stage.

Within the 83 categorical variables, 20 variables were used to identify the website stage of Canadian wineries' websites. There were five items designed for the presence stage: the winery, the wine products or services, contact information, email list on the website, and one-way communication. The first four items could be obtained by assessing the wineries' websites. Thereafter, a computing function in SPSS was used to calculate how many items had been owned by a website. If the winery had at least one of the items, the one-way

communication variable was marked Yes. The same process was followed for the portals and transactions integration stages.

In the portals stage, the six items included order placing, online feedback function, search function, site map or site index, email hyperlink and two-way communication. The first five items were collected directly from the website. Here, if a winery's website only provided offline order placing, it was not considered as having a two-way communication function online. If it only had an email hyperlink feature without any other features in this category, it was also considered as not having two- way communication because an email hyperlink needs to be supported by third party software, such as outlook or outlook express to complete the process of sending an email. Thus, it was clear that the email function could not be entirely fulfilled on the website. If the winery had at least one of the features except the email hyperlink, it was identified as having the two-way communication function. The two-way communication variable for this winery was then filled as Yes in SPSS.

In the transactions integration stage, nine items were included: indirect money transaction, direct money transaction, B2B, B2C, communities, e-marketplace, hyperlink to 3rd party e-marketplace, e-auction on winery website and overall money transaction. Since Rao's (2003) research set the benchmark for this stage at money transactions, any winery which featured indirect or direct money transactions functions was classified into the transactions integration stage.

Enterprises Integration Survey Results

The enterprises integration stage included advanced and sophisticated technological functions which were unidentifiable by reviewing the websites. In order to accurately classify the winery websites into each stage, an email survey with six short questions was devised. The data obtained by content analysis showed 43 wineries in the transactions integration stage. They became the enterprises integration survey subjects and were subsequently contacted via e-mail. Six short questions were asked to solicit additional information to help identify the websites in the enterprises integration stage. Two emails came back as undeliverable, one due to an incorrect email address, and the other because of a full email box. Five wineries replied to the email survey for an overall response rate of 12.2 %. Two wineries indicated that they integrate customer relationship management on their websites, one reported that it integrates both customer relationship and supply chain management on its website, and the remaining two wineries did not have any enterprises integration features. Because the email response rate was below 50%, the backup plan of a telephone survey was implemented.

The telephone survey took three days for calls and six days to input and analyze the data. Thirty eight wineries in the transactions integration stage, which had not replied to the email survey, were called by the author. Persons contacted were informed that the survey was conducted through the University of Lethbridge and was designed to study the websites of Canadian wineries. Thirty two wineries responded to the telephone survey and answered the six questions. The overall response rate was 84%, which was much higher than the email survey response rate.

During the telephone survey, the author questioned why the winery did not integrate functions such CRM, SCM or VCM on the website. Several respondents said they were just small wineries and wanted to "keep the website simple," some judged these functions as too complex, and some felt that these functions were not proper for their companies at this point in time. Others mentioned that these functions proved too expensive and conflicted with their dollar value strategies. One surprise finding came when a winery contact told the author that she had received the email survey but thought it was not necessary to reply since her winery does not have any of these functions.

Following the email and telephone surveys, 37 responses were on hand, an overall response rate of 86%. Six wineries did not answer either of the surveys and will be considered as missing data. Within the 37 wineries, 22 reported having integrated customer relationship management functions on their websites, two said that they had integrated both CRM and SCM functions on their websites, and only one winery indicated that it incorporated the CRM function and also had a high level collaborations function. Therefore, none of the respondents reached the full enterprises integration level. Based on Rao's (2003) definition, a company needs to integrate B2B, B2C, and value chain management into its website to reach the full enterprises integration level. Companies in this level use e-commerce systems to fulfill customer relationship management and supply chain management and the process of doing business online is indistinguishable from that offline (Rao, Metts and Monge, 2003). Based on the data collected, no Canadian winery had achieved this stage.

In order to distinguish the wineries that incorporated some of the above-mentioned functions from those that did not, a rule of operationalization of the enterprises integration stage was established. If a winery in the direct money transactions level showed any of the enterprises integration features, it was classified into the partial enterprises integration stage. The data identified twelve wineries in the direct money transactions stage and they also integrated the CRM function on their website, therefore, they were moved from the transactions integration stage to the partial enterprises integration stage.

Following the overall analysis, these were the results. The table and the pie chart below illustrate how the 206 websites were classified in the revised website stages. The market integration stage is not demonstrated here. It will be analyzed in the next section. Clearly, most websites (41.5%) were only in the portals stage, followed by the presence stage with 34%. The transactions stage accounted for 15% of the overall websites, with indirect transactions at 9.2% and direct transactions at 5.8%. The smallest amount of websites were classified into the partial enterprises integration stage, and none of them fully integrated Customer Relationship Management (CRM), Value Chain Management (VCM) and Supply Chain Management (SCM) at this time, so none were classified into full enterprises integration. Based on these results, the intended separation of the transactions integration stage into indirect and direct money transactions was successfully accomplished since a sizable number of wineries were identified in each of these two stages.

Table 19 Classifications of the Website Stages

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Presence Stage	70	34.0	34.0	34.0
	Portals Stage	93	45.1	45.1	79.1
	Indirect Transactions Stage	19	9.2	9.2	88.3
	Direct Transactions Stage	12	5.8	5.8	94.2
	Partial Enterprises Integration Stage	12	5.8	5.8	100.0
	Total	206	100.0	100.0	

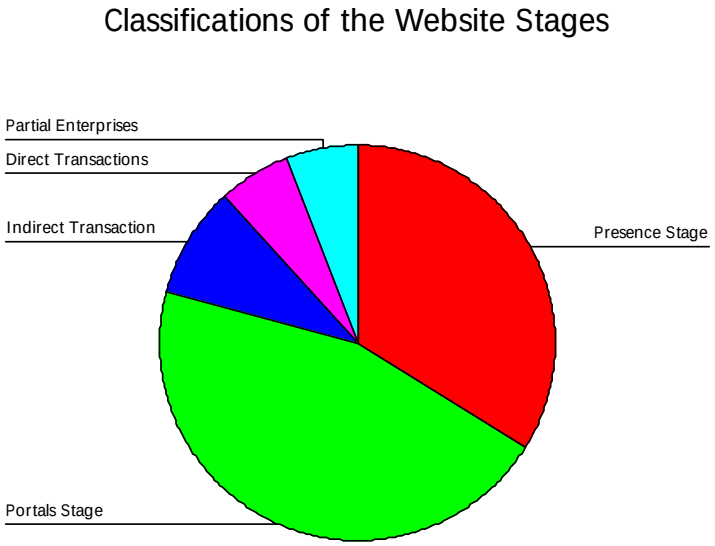

Figure 12. Classification of the Website Stages

Reliability Assessing Results

A second coder reliability assessment was conducted after the 206 websites had been assessed. A sample of 42 (20%) websites was coded by a second coder to check the reliability of the coding scheme. The data independently collected by the second coder showed 95.4% agreement with that collected by the author. Following a discussion of these findings, the author and the second coder reached 99.6% agreement about the overall data, which was far above the minimal 80% agreement level necessary for this type of study (Riffe, Lacy and Fico, 1998).

6.4. Testing of Hypotheses

In this section, the three competing hypotheses will be justified by the data collected. The first question that this study would like to answer is whether market integration can be added in Rao's model as a new stage. The following three parts demonstrate how this question has been answered. First, descriptive statistics about the market integration stage are described. Second, Multinomial Logistic Regression results have been used to test the competing hypotheses. Third, the research question of whether the content features on the website are equally distributed in each stage in Rao's model, or if some of them are more prominent in the early or later stages, will be answered here. Descriptive statistics of variables about content features are presented to support this effort.

For the reader's convenience, here are the labels used for the variables in SPSS. In this study, website stage was the dependent variable, which is a categorical variable with four levels. Each of the levels represented one website stage in Rao's model. They are presence,

portals, transactions integration, and enterprises integration. The independent variables included market integration, internal market integration, external market integration, technology functions, marketing functions and legal and social awareness. Based on the variable scales developed in step seven of the research process, variables of the independent variables are represented by the quantitative variables listed as below. Sum of Market Integration Features (MI_SUM) is the sum of all market integration content features. Sum of Internal Market Integration Features (INMK_SUM) is the sum of all internal market integration content features. Sum of External Market Integration Features (EXMK_SUM) is the sum of all external market integration content features. Sum of Technological Features (TECH_SUM) is the sum of all technological content features. Sum of Marketing Features is the total of the marketing content features (MFEATSUM), and sum of Legal & Social Awareness is the sum of all legal and social related content features (LEGALSUM).

6.4.1. Descriptive Statistics of the Market Integration Stage

This study proposed a new concept, Market Integration, and sought to determine whether it can be added into Rao's model as a new stage. As mentioned before, market integration refers to ways in which a winery integrates its business with other organizations, such as tour agencies, restaurants and wine associations, in order to expand the potential wine market. It is separated into two categories, internal and external. Based on cluster theory, external market integration means a winery demonstrates relations with other organizations on its website. Internal market integration means a winery incorporates business activities other than selling wines. This concept derives from a market concept:

brand-/line-extension. Brand extension refers to a company's launch of a new brand beyond its initial range of products, or outside of its category (Blichfeldt, 2005).

The three competing hypotheses previously proposed were:

H1a: Market Integration features stay equal in use across the four website stages in Rao's model.

H1b: Market Integration features increase in use across the four website stages in Rao's model.

H1c: Market integration will fit into the model as a unique stage. Descriptive statistics results about market integration, internal and external market integration will be reported in this section.

Table 20 shows that 93.7% of the wineries have market integration features on their websites. Table 21 depicts that 79.6% of the wineries have internal market integration features on the websites. Table 22 shows that 81.1% of the wineries have external market integration features on the websites.

Table 20 The Frequency of Market Integration

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	NO	13	6.3	6.3	6.3
	YES	**193**	**93.7**	93.7	100.0
	Total	206	100.0	100.0	

Table 21 The Frequency of Internal Market Integration

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	NO	42	20.4	20.4	20.4

	YES	**164**	**79.6**	79.6	100.0
	Total	206	100.0	100.0	

Table 22 The Frequency of External Market Integration

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	NO	39	18.9	18.9	18.9
	YES	**167**	**81.1**	81.1	100.0
	Total	206	100.0	100.0	

Table 23 shows that the market integration features in use increased across the four website stages. The percentage of the websites demonstrating market integration features ranged from 84.3% in the presence stage, to 97.8% in the portals stage, and 100% in both the transactions integration and enterprises integration stages.

Table 23 also demonstrates that the proportion of websites exhibiting both internal and external market integration features is higher in each subsequent stage. These percentages for internal market integration features range from 64.3% in the presence stage, to 84.9% in the portals stage, 90.3% in the transactions integration stage, and 100% in the enterprises integration stage. For external market integration features, the percentages are 65.7% in the presence stage, 84.9% in the portals stage, 96.8% in the transactions integration stage, and 100% in the enterprises integration stage. A regression model shows that market integration features increase in use across the four website stages in Rao's model as well.

Table 23 The Frequency of Market Integration, Internal and External Market Integration

		The website stages							
		Presence Stage		Portals Stage		Transactions Integration Stage		Partial Enterprises Integration Stage	
		Count	Col %	Count	Col %	Count	Col %	Count	Col %
Market Integration Features	NO	11	15.7%	2	2.2%				
	YES	**59**	**84.3%**	**91**	**97.8%**	**31**	**100.0%**	**12**	**100.0%**
Internal Market Integration Features	NO	25	35.7%	14	15.1%	3	9.7%		
	YES	**45**	**64.3%**	**79**	**84.9%**	**28**	**90.3%**	**12**	**100.0%**
External Market Integration Features	NO	24	34.3%	14	15.1%	1	3.2%		
	YES	**46**	**65.7%**	**79**	**84.9%**	**30**	**96.8%**	**12**	**100.0%**

Further analysis showed that the number of market integration features in use was also increased in each subsequent stage. Thirteen market integration features, including five internal and eight external features, were assessed in this research. Table 24 shows the descriptive statistical results of the overall market integration features, internal market integration features and external market integration features. It also shows the increasing tendency of market integration features in the four stages, i.e., market integration features on the websites are increased in each subsequent stage. The mean in the presence stage is three, in the portals and transactions integration stage it is five and six respectively, and in the partial enterprises integration stage it turns out to be seven.

The average of internal market integration features in the presence stage is one, in the portals stage it is two, and in both the transactions integration and partial enterprises integration stage the number is highest, namely three. The average of external market integration features in the presence stage is two, while it is three in the portals, transactions integration as well as partial enterprises integration stage.

Table 24 The Descriptive Statistics of Market Integration

		The website stages			
		Presence Stage	Portals Stage	Transactions Stage	Partial Enterprises Integration Stage
Market Integration Features Sum	Mean	**3**	**5**	**6**	**7**
	Minimum	0	0	1	4
	Maximum	8	10	12	11
	Std. Deviation	3	3	3	2
Internal Market Integration Features Sum	Mean	**1**	**2**	**3**	**3**
	Minimum	0	0	0	2
	Maximum	5	5	5	5
	Std. Deviation	1	1	1	1
External Market Integration Features Sum	Mean	**2**	**3**	**3**	**3**
	Minimum	0	0	0	1
	Maximum	6	7	7	6
	Std. Deviation	2	2	2	2

The results demonstrated that market integration had been incorporated by a majority of the wineries' websites. The websites in each of the four subsequent stages exhibit market integration features, with the proportion of websites that own market integration features increasing across these four stages. Therefore, market integration became the fifth stage in the revised model.

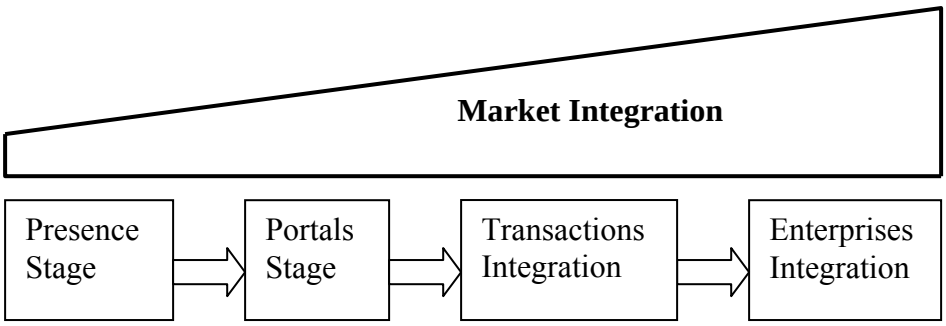

Figure 5. Hypothesis 1b

Market integration features were found in each of the four stages. The proportion of the websites exhibiting these features was higher in each subsequent stage. Internal and external market integration features revealed the same tendency. The increasing trend was clearly seen in Tables 23 and 24. Thus, H1b was supported by the descriptive statistical results and other competing hypotheses, H1a and H1c, were rejected.

6.4.2. Multinomial Logistic Regression

Multinomial Logistic Regression was performed to assess whether the presence of market integration across stages is statistically significant. The dependent variable Website Stage is categorical. This categorical dependent outcome had more than two levels, so Multinomial Logistic Regression was used instead of Binary Logistic Regression to analyze the data. Four groups, namely presence, portals, transactions integration and partial enterprises integration, were to be predicted by the regression model. In the analysis to follow, the presence stage was chosen as a reference group. The predictors used were four quantitative variables, Sum of Market Integration Features

(MI_SUM), Sum of Technological Features (TECH_SUM), Sum of Marketing Features (MFEATSUM), and Sum of Legal & Social Awareness (LEGALSUM).

Table 25 Regression - Case Processing Summary

		N	Marginal Percentage
The website stage	Presence Stage	70	**34.0%**
	Portals Stage	93	**45.1%**
	Transactions Stage	31	**15.0%**
	Partial Enterprises Integration Stage	12	**5.8%**
Valid		206	100.0%
Missing		0	
Total		206	
Subpopulation		154(a)	

a The dependent variable has only one value observed in 129 (83.8%) subpopulations.

The frequency table (Table 25) of the dependent variable showed that most websites (41.5%) were in the portals stage, followed by the presence stage with 34%. The transactions stage accounted for 15% of the overall websites. The smallest amount (5.8%) of websites was classified into the partial enterprises integration stage.

Table 26 Regression - Model Fitting Information

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	449.794			
Final	377.517	72.277	12	.000

Table 26 shows that the independent variables significantly predicted website stage (x^2 [12]=72.3, p<.001), so the null hypothesis that all effects of the independent variables are zero can be rejected. Table 26 also shows that the four quantitative predictors' model gave adequate predictions compared to the Intercept Only (Null model). The Null model uses the modal class (Presence), see Table 25, as the model's prediction accuracy – 34%. Table 28 shows that this four quantitative predictors' model compared to the Null model provided better accuracy for the presence stage and the portals stage, but was not good for predicting the transactions integration and the partial integration stage. Insufficient sample units in two stages might cause this result. Table 26 showed that the current model is outperforming the null, and it is a good model to predict the presence and the portals website stages.

Table 27 Regression - Pseudo R-Square

Cox and Snell	.296
Nagelkerke	.327
McFadden	.149

Table 27 indicates the proportion of variation being explained by the model, namely about 32.7% (maximum 100%) of variation is being explained by the four quantitative predictors' model.

Table 28 Regression – Four Stages Classification

Observed	Predicted				
	Presence Stage	Portals Stage	Transactions Stage	Partial Enterprises Integration Stage	Percent Correct
Presence Stage	43	27	0	0	**61.4%**
Portals Stage	23	70	0	0	**75.3%**
Transactions Stage	2	28	1	0	**3.2%**
Partial Enterprises Integration Stage	0	12	0	0	**.0%**
Overall Percentage	33.0%	66.5%	.5%	.0%	**55.3%**

Table 29 Regression - Likelihood Ratio Tests

Effect	-2 Log Likelihood of Reduced Model	Chi-Square	df	Sig.
Intercept	468.315	90.798	3	.000
mi_sum	386.396	8.879	3	**.031**
mfeatsum	391.077	13.560	3	**.004**
tech_sum	379.443	1.926	3	.588
legalsum	399.371	21.854	3	**.000**

The chi-square statistic is the difference in -2 log-likelihoods between the final model and a reduced model. The reduced model is formed by omitting an effect from the final model. The null hypothesis is that all parameters of that effect are 0.

Table 29 shows that the null hypothesis, which holds that the effects on all odds-ratios of the dependent variable are simultaneously equal to zero, can be rejected for the intercept and independent variables: market integration, marking functions, and legal and social

awareness. The Likelihood ratio test shows the contribution of each variable to the model —– Sum of Market Integration Features (MI_SUM), Sum of Marketing Features (MFEATSUM), and Sum of Legal & Social Awareness (LEGALSUM) had a significant ($p<0.05$) contribution but not Sum of Technological Features (TECH_SUM). The loss of fit associated with Sum of Legal & Social Awareness (LEGALSUM) was strongest while the loss of fit associated with Technological Features Sum (TECH_SUM) was weakest. For these four quantitative variables, parameters with significant positive (negative) coefficients increase (decrease) the likelihood of that response category with respect to the reference category.

Table 30 Regression - Parameter Estimates

The website stage(a)		B	Std. Error	Wald	df	Sig.	Exp(B)	95% Confidence Interval for Exp(B)	
								Lower Bound	Upper Bound
Portals Stage	Intercept	-1.922	.442	18.881	1	.000			
	mi_sum	.122	.079	2.376	1	.123	1.129	.968	1.318
	mfeatsum	.302	.108	7.859	1	**.005**	1.353	1.095	1.671
	tech_sum	.215	.233	.856	1	.355	1.240	.786	1.956
	legalsum	.869	.258	11.383	1	**.001**	2.384	1.439	3.950
Transactions	Intercept	-4.473	.754	35.156	1	.000			
Stage	mi_sum	.261	.106	6.064	1	**.014**	1.298	1.055	1.598
	mfeatsum	.395	.149	7.005	1	**.008**	1.485	1.108	1.990
	tech_sum	.098	.312	.099	1	.753	1.103	.599	2.031
	legalsum	1.237	.316	15.357	1	**.000**	3.447	1.856	6.401
Partial	Intercept	-7.106	1.409	25.444	1	.000			
Enterprises	mi_sum	.350	.151	5.358	1	**.021**	1.419	1.055	1.908
Integration	mfeatsum	.624	.232	7.252	1	**.007**	1.867	1.185	2.942
Stage	tech_sum	-.237	.460	.265	1	.606	.789	.320	1.945
	legalsum	1.362	.416	10.708	1	**.001**	3.904	1.727	8.828

a The reference category is: Presence Stage.

Table 30 shows that Sum of Marketing Features (MFEATSUM), and Sum of Legal & Social Awareness (LEGALSUM) made significant contributions to the portals stage. The increased Sum of Marketing Features (MFEATSUM) and Sum of Legal & Social Awareness (LEGALSUM) raised the likelihood to be the portals stage with respect to the presence stage.

Sum of Market Integration Features (MI_SUM), Sum of Marketing Features (MFEATSUM), and Sum of Legal & Social Awareness (LEGALSUM) made a significant ($p<0.05$) contribution to the transactions integration stage. The increased Sum of Market Integration Features (MI_SUM), Sum of Marketing Features (MFEATSUM) and Sum of Legal & Social Awareness (LEGALSUM) enhanced the likelihood to be the transactions integration stage with respect to the presence stage.

Sum of Market Integration Features (MI_SUM), Sum of Marketing Features (MFEATSUM), and Sum of Legal & Social Awareness (LEGALSUM) also made a significant ($p<0.05$) contribution to the partial enterprises integration stage. The increased Sum of Market Integration Features (MI_SUM), Sum of Marketing Features (MFEATSUM) and Sum of Legal & Social Awareness (LEGALSUM) enhanced the likelihood to be the partial enterprises integration stage with respect to the presence stage. The regression showed that the market integration features were significantly different in the portals, transactions integration and partial enterprises integration stages when the presence stage was referenced as a base. The significant difference of market integration features in each of the four stages supported H1b as well.

The regression results clearly demonstrated that the independent variables market integration, marketing features, and legal & social awareness comprise a regression equation, which can be used to predict the dependent variable website stage. Market integration, marketing features, and features of legal and social awareness were competent predictors for making inferences on the website stage.

In order to fully test hypothesis one, independent sample T-tests were used to test the difference between each pair of the stages: presence and portals, portals and transactions integration, transactions integration and partial enterprises integration. Table 32 showed a significant difference between the presence and portals stage with regard to market integration ($p<.001$). Table 34 showed a difference between the portals and transactions stage ($p=.05$). The last T-test exam was conducted between the transactions integration and the partial enterprises integration. Table 36 did not show any difference between these two stages with regard to market integration ($p>.05$). There were two possible explanations for this non-significant result. First, the sample size of twelve in both of these two groups was relatively small, especially for the partial enterprises integration stage. The small sample size might not have been enough to demonstrate a statistically significant difference between the last two stages. Second, the websites in the transactions integration stage were classified into the partial enterprises integration stage when they contained only one of the advanced functions belonging to the enterprise integration stage, which may have been insufficient to justify becoming members of the highest stage.

Table 31 Market Integration Group Statistics: Presence vs. Portals

	The website stage	N	Mean	Std. Deviation	Std. Error Mean
Market Integration Features Sum	Presence Stage	70	3.30	2.550	.305
	Portals Stage	93	4.88	2.690	.279

Table 32 Market Integration T-Test: Presence vs. Portals

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Market Integration Features Sum	Equal variances assumed	.029	.866	-3.799	161	**.000**	-1.58	.416	-2.404	-.760
	Equal variances not assumed			-3.828	152.664	.000	-1.58	.413	-2.398	-.765

Table 33 Market Integration Group Statistics: Portals vs. Transactions Integration

	The website stage	N	Mean	Std. Deviation	Std. Error Mean
Market Integration Features Sum	Portals Stage	93	4.88	2.690	.279
	Transactions Integration Stage	31	5.97	2.702	.485

Table 34 Market Integration T-Test: Portals vs. Transactions Integration

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Market Integration Features Sum	Equal variances assumed	.020	.889	-1.945	122	**.054**	-1.09	.558	-2.192	.020
	Equal variances not assumed			-1.940	51.277	.058	-1.09	.560	-2.210	.037

Table 35 Market Integration Group Statistics: Transactions vs. Partial Enterprises Integration

	The website stage	N	Mean	Std. Deviation	Std. Error Mean
Market Integration Features Sum	Transactions Integration Stage	31	5.97	2.702	.485
	Partial Enterprises Integration Stage	12	6.75	1.712	.494

Table 36 Market Integration T-Test: Transactions vs. Partial Enterprises Integration

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Market Integration Features Sum	Equal variances assumed	5.309	.026	-.930	41	**.358**	-.78	.842	-2.482	.917
	Equal variances not assumed			-1.129	31.642	.267	-.78	.693	-2.194	.629

In order to avoid the inaccurate statistic analysis caused by the insufficient sample size, further analysis has been carried out by combining websites in partial enterprise integration stage into transactions integration stage. Based on Rao's definition of enterprise integration stage, websites in this stage need to accomplish the full integration of CRM, SCM, and VCM. Although websites classified into partial enterprises integration stage have one or two advanced functions in this stage, none of them reach the full integration benchmark. These websites still belong to the transactions integration stage. The following independent T-tests were conducted to test the difference between portals and transactions integration. Table 38 showed a significant difference between the portals and transactions integration with regard to market integration ($p<.001$). Overall, these results support Hypothesis 1b, which suggests that market integration features will increase at all successive stages.

Table 37 Market Integration Group Statistics: Portals vs. Transactions Integration (II)

	Three website stages: Presence, Portals, Transactions	N	Mean	Std. Deviation	Std. Error Mean
Market Integration Features Sum	Portals Stage	93	4.88	2.690	.279
	Transactions Stage	43	6.19	2.471	.377

Table 38 Market Integration T-Test: Portals vs. Transactions Integration (II)

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Market Integration Features Sum	Equal variances assumed	1.409	.237	-2.696	134	**.008**	-1.30	.484	-2.261	-.347
	Equal variances not assumed			-2.782	88.495	.007	-1.30	.469	-2.236	-.373

The intention of this research was to revise a technological model by incorporating marketing perspective. Market integration as the key concept of this study was justified by the data. In addition, within market integration, the author assessed this concept from two perspectives: internal market integration which demonstrates brand/line extension characteristics, and external market integration which helps to better understand cluster theory. A further analysis was conducted to assess market integration where two new predictors, internal market integration and external market integration, were entered into the regression model, replacing the market integration variable.

Table 39 Post Hoc Regression-Model Fitting Information

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	469.438			
Final	392.256	77.181	15	.000

Table 40 Post Hoc Regression-Pseudo R-Square

Cox and Snell	.312
Nagelkerke	.345
McFadden	.159

Table 41 Post Hoc Regression-Likelihood Ratio Tests

Effect	-2 Log Likelihood of Reduced Model	Chi-Square	df	Sig.

Intercept	485.905	93.649	3	.000
INMK_SUM	401.450	9.193	3	**.027**
EXMK_SUM	396.231	3.975	3	**.264**
MFEATSUM	402.805	10.549	3	.014
TECH_SUM	394.556	2.299	3	.513
LEGALSUM	414.384	22.128	3	**.000**

The chi-square statistic is the difference in -2 log-likelihoods between the final model and a reduced model. The reduced model is formed by omitting an effect from the final model. The null hypothesis is that all parameters of that effect are 0.

Independent sample T-tests was performed to assess the difference between each pair of the stages: presence and portals, portals and transactions integration with regard to the internal and external market integration.

Table 42 Internal Market Integration Group Statistics: Presence vs. Portals

	Three website stages: Presence, Portals, Transactions	N	Mean	Std. Deviation	Std. Error Mean
Internal Market Integration Features Sum	Presence Stage	70	1.46	1.359	.162
	Portals Stage	93	2.13	1.361	.141

Table 43 Internal Market Integration T-Test: Presence vs. Portals

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Internal Market Integration Features Sum	Equal variances assumed	.319	.573	-3.122	161	**.002**	-.67	.215	-1.097	-.247
	Equal variances not assumed			-3.123	148.898	.002	-.67	.215	-1.097	-.247

Table 44 Internal Market Integration Group Statistics: Portals vs. Transactions Integration

	Three website stages: Presence, Portals, Transactions	N	Mean	Std. Deviation	Std. Error Mean
Internal Market Integration Features Sum	Portals Stage	93	2.13	1.361	.141
	Transactions Stage	43	2.84	1.362	.208

Table 45 Internal Market Integration T-Test: Portals vs. Transactions Integration

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Internal Market Integration Features Sum	Equal variances assumed	.173	.678	-2.821	134	**.006**	-.71	.251	-1.205	-.212
	Equal variances not assumed			-2.821	81.809	.006	-.71	.251	-1.208	-.209

Table 46 External Market Integration Group Statistics: Presence vs. Portals

	Three website stages: Presence, Portals, Transactions	N	Mean	Std. Deviation	Std. Error Mean
External Market Integration Features Sum	Presence Stage	70	1.84	1.854	.222
	Portals Stage	93	2.75	2.114	.219

Table 47 External Market Integration T-Test: Presence vs. Portals

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
External Market Integration Features Sum	Equal variances assumed	4.942	.028	-2.865	161	**.005**	-.91	.318	-1.537	-.283
	Equal variances not assumed			-2.918	157.210	.004	-.91	.312	-1.526	-.294

Table 48 External Market Integration Group Statistics: Portals vs. Transactions Integration

	Three website stages: Presence, Portals, Transactions	N	Mean	Std. Deviation	Std. Error Mean
External Market Integration Features Sum	Portals Stage	93	2.75	2.114	.219
	Transactions Stage	43	3.35	1.785	.272

Table 49 External Market Integration T-Test: Portals vs. Transactions Integration

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
External Market Integration Features Sum	Equal variances assumed	4.961	.028	-1.603	134	**.111**	-.60	.372	-1.332	.139
	Equal variances not assumed			-1.706	95.790	.091	-.60	.349	-1.290	.098

The independent T-test results (Tables 43 and 475) showed that internal market integration features were significantly different among four stages; however, external market integration features were not (Tables 47 and 49). The significant difference of market integration in the regression model was mainly driven by internal market integration.

External market integration was a web feature category used to test the virtual relations between wineries and other organizations. These results (Tables 47 and 49) suggested a significant difference between presence and portals stage ($p<.05$) and no significant difference between portals and transactions integration stage ($p>.05$) with regard to the relationships between wineries and other organizations. Networks or linkages exhibited on a winery's website did not directly relate to its website stage when the website is in the stage higher than presence stage.

6.4.3. Testing the Hypothesis of Transactions Integration Stage Separation

The second hypothesis in this study holds that, H2: The transactions integration stage can be divided into indirect transactions and direct transactions levels.

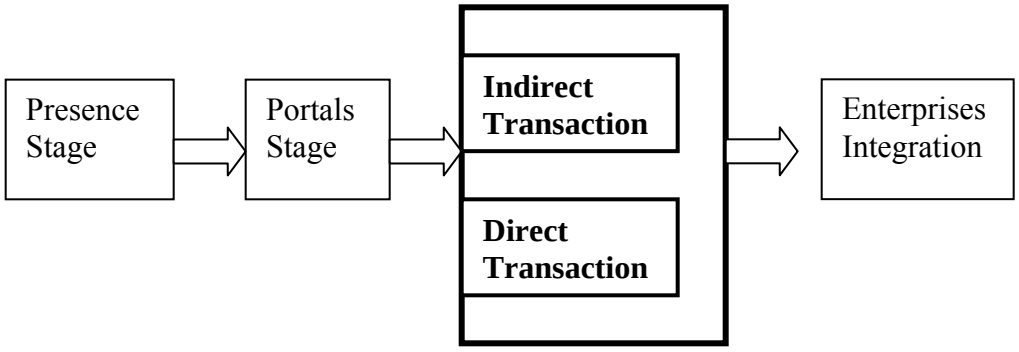

Figure 7. Hypothesis 2

Table 50 The Frequency of Indirect and Direct Transactions Integration

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Presence Stage	70	34.0	34.0	34.0
	Portals Stage	93	45.1	45.1	79.1
	Indirect Transactions Stage	**19**	**9.2**	**9.2**	**88.3**
	Direct Transactions Stage	**12**	**5.8**	**5.8**	**94.2**
	Partial Enterprises Integration Stage	12	5.8	5.8	100.0
	Total	206	100.0	100.0	

The content analysis results (Table 50) successfully supported this hypothesis. The author found 19 wineries' websites which listed the website address of their third-party partner, while 12 wineries allowed their customers to complete the online purchasing process on their website without any involvement of outside representatives. Thus, of the 43 websites in the transactions integration stage, 19 were in the indirect transactions level and 12 were placed in the direct transactions level. Since a meaningful distinction could be made between these groups, and each group was sufficiently large, these results adequately support Hypothesis 2.

6.5. Descriptive Statistics of Other Variables

The research question of whether the content features on the website were equally distributed in each stage of Rao's model, or if some of them were more prominent in the early or later stages, is answered with the help of descriptive statistics of variables about content features. The statistical results about the new categories constructed in this study are summarized below.

- **Marketing Functions (9 items)**

Website content is one of the essential components of a website, and high quality websites not only have sections, such as press release and publication, but are also kept up to date (Hassan and Li, 2005). In recent times, the tendency of incorporating Internet and website into traditional marketing activities has become prominent (Thorbjornsen and Supphellen, 2004). Internet and website as a new technology can facilitate marketing activities in many ways, by expanding traditional one-on-one marketing functions to many by putting advertisements on the website. Within the context of Canadian wineries' websites, web items such as newsletters, press releases, events and awards, can fulfill the marketing advertisement function. In addition, as the marketing paradigm shifts from being sales-oriented to customer-oriented, no company can afford to ignore the most essential marketing function, customer care. In a winery's website, customer care components could include tasting notes, map & location and business hours, all of which are useful items for customers. Offline functions may be toll-free telephone numbers and the customization of wine labels. Nine features have been used for measuring the marketing function. Each of these features is a categorical variable with at least two levels, a Yes and

No. In order to carry on an independent T-test, a ratio variable has been created from the categorical variables. SPSS software automatically computes the sum number of features with value Yes and generates the value for the ratio variable. For instance, nine content web features have been used for assessing marketing function, thus a 0 to 9, 10 point ratio scale was created for this variable. If a website has 6 features listed below, then a ratio variable generated for marketing function will be filled with 6.

Scale: 0 1 2 3 4 5 6 7 8 9

1) Newsletters (Marketing Advertisement Feature)
2) Press Releases (Marketing Advertisement Feature)
3) Events held by winery (Marketing Advertisement Feature)
4) Awards won by the Wines (Marketing Advertisement Feature)
5) Tasting Notes & Recipes (Customer Care Feature)
6) Map & Location (Customer Care Feature)
7) Business Hours (Customer Care Feature)
8) Toll-free contact capability (Customer Care Feature)
9) Customized Wine Labels (Customer Care Feature)

Descriptive statistic results (Tables 51 and 52) showed that marketing features increased in use across the website stage model, just as market integration did. Wineries with a high level website stage included more marketing features than those at lower levels. For instance, wineries with websites in the partial enterprises integration stage tended to put more information, such as tasting notes, events, and a map, on their website than those with websites in the presence stage. For instance, Table 51 showed that 83.3% of the wineries in the highest website stage contained information about events, followed by the

transactions integration stage at 67.7%, the portals stage at 59.1%, and the presence stage at 31.4%. An interesting number displayed in Table 52 is that 58.4% of the wineries in the partial enterprises integration stage are open year-round, while only 21.4% of the wineries in the presence stage are. A toll-free phone number as a marketing feature showed a regard for customer care. 58.3% of the wineries in the partial enterprises integration stage included this information on the website, compared to 15.7% in the presence stage. Independent t-test results (Tables 54 and 56) exhibited that marketing function is significant different among the four stages. Table 54 showed a significant difference between the presence and portals stage ($p<.001$) and Table 56 showed the same result between the portals and transactions integration stage ($p<.05$).

An explanation as to why the wineries in a higher website stage tend to have more such features was beyond the scope of this study. One possibility for this phenomenon relates to business size. Future research could investigate a resource-based theory. The research question could be whether large companies, which have more resources on hand than smaller ones, would have higher stage websites than small and medium-sized companies.

Table 51 The Frequency of Marketing Function Features (Part I)

		The website stage							
		Presence Stage		Portals Stage		Transactions Stage		Partial Enterprises Integration Stage	
		Count	Col %	Count	Col %	Count	Col %	Count	Col %
Newsletters	NO	67	95.7%	62	66.7%	17	54.8%	7	58.3%
	YES	**3**	**4.3%**	**31**	**33.3%**	**14**	**45.2%**	**5**	**41.7%**
Press Release	NO	58	82.9%	65	69.9%	17	54.8%	8	66.7%
	YES	**12**	**17.1%**	**28**	**30.1%**	**14**	**45.2%**	**4**	**33.3%**
Events	NO	48	68.6%	38	40.9%	10	32.3%	2	16.7%
	YES	**21**	**30.0%**	**55**	**59.1%**	**21**	**67.7%**	**10**	**83.3%**
	YES, Not Wine Related	1	1.4%						
Awards	NO	40	57.1%	31	33.3%	7	22.6%	3	25.0%
	YES	**30**	**42.9%**	**62**	**66.7%**	**24**	**77.4%**	**9**	**75.0%**

Table 52 The Frequency of Marketing Function Features (Part II)

		The website stage							
		Presence Stage		Portals Stage		Transactions Stage		Partial Enterprises Integration Stage	
		Count	Col %	Count	Col %	Count	Col %	Count	Col %
Tasting Notes & Recipes, Food Pairing	NO	43	61.4%	44	47.3%	17	54.8%	4	33.3%
	YES	**27**	**38.6%**	**49**	**52.7%**	**14**	**45.2%**	**8**	**66.7%**
Map & Location	NO	27	38.6%	20	21.5%	5	16.1%	1	8.3%
	YES	**43**	**61.4%**	**73**	**78.5%**	**26**	**83.9%**	**11**	**91.7%**
Business Hours	NO	30	42.9%	35	37.6%	7	22.6%	4	33.3%
	YES	9	12.9%	10	10.8%	5	16.1%	1	8.3%
	YES, Daily Open	3	4.3%	4	4.3%	2	6.5%		
	YES, Seasonal Around	13	18.6%	14	15.1%	4	12.9%		
	YES, Year Around Open	15	**21.4%**	**30**	**32.3%**	**13**	**41.9%**	**7**	**58.3%**
Toll Free	NO	59	84.3%	68	73.1%	24	77.4%	5	41.7%
	YES	**11**	**15.7%**	**25**	**26.9%**	**7**	**22.6%**	**7**	**58.3%**
Customized Wine Labels	NO	64	91.4%	78	83.9%	25	80.6%	8	66.7%
	YES	**6**	**8.6%**	**15**	**16.1%**	**6**	**19.4%**	**4**	**33.3%**

Table 53 Marketing Function Group Statistics: Presence vs. Portals

	The website stage	N	Mean	Std. Deviation	Std. Error Mean
Marketing features sum	Presence Stage	70	2.79	1.785	.213
	Portals Stage	93	4.26	1.994	.207

Table 54 Marketing Function T-Test: Presence vs. Portals

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Marketing features sum	Equal variances assumed	1.100	.296	-4.879	161	**.000**	-1.47	.302	-2.068	-.876
	Equal variances not assumed			-4.956	156.172	.000	-1.47	.297	-2.059	-.886

Table 55 Marketing Function Group Statistics: Portals vs. Transactions Integration

	Three website stages: Presence, Portals, Transactions	N	Mean	Std. Deviation	Std. Error Mean
Marketing features sum	Portals Stage	93	4.26	1.994	.207
	Transactions Stage	43	5.02	1.793	.273

Table 56 Marketing Function T-Test: Portals vs. Transactions Integration

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Marketing features sum	Equal variances assumed	1.690	.196	-2.146	134	**.034**	-.77	.357	-1.470	-.060
	Equal variances not assumed			-2.232	90.306	.028	-.77	.343	-1.446	-.084

- **Technological Functions (5 items)**

The technological functions described in this study correlated to sophisticated website content. Basic web features, such as graphics, video and sound clips, can be used to measure the sophistication of the website design (Auger, 2005). Multimedia components on a website will facilitate the customer's participation (Griffith, Krampf and Palmer, 2001). If used properly, the graphics, pictures and sound clips might play an important role of providing rich information to the customers or even convincing them (Ives,1982). Therefore, the 6-points technological scale was designed to measure the sophistication of the wineries' websites. This ratio scale variable is developed from the five categorical content features with at least two levels, a Yes and No. When a website does not have any of these features, the value of ratio variable is 0; otherwise the value is equal to the sum number of features with value Yes. From a marketing perspective, websites with the features listed below might be more impressive to browsers. For example, when a winery's website includes a photo album of its vineyard, its distilling plant or tasting room, the potential wine buyer might feel this winery is more attractive than others. In this study, the author investigated whether such items of sophistication in website design had any relationship with the technologically driven website stage.

Scale: 0 1 2 3 4 5

1) Photo Album & Gallery
2) Virtual Tour
3) Background Music
4) Online Visitor Counter
5) Dynamic Pictures & Flash Effects & Moving Pictures or Word

Table 57 shows that technological features did not increase in use across website stages. A higher stage website did not guarantee that it would include more technological features than those at lower levels. For instance, wineries with websites in the partial enterprises integration stage did not contain background music features, while 12.9% of the websites in the transactions integration stage did. The proportion of the websites that included a feature of dynamic pictures or flash effects did not notably differ in each of the four stages. These results were not surprising. So-called technological features are simple functions and easily fulfilled. No extra investment in equipment or expertise is needed to create them. The independent T-test results (Tables 59 and 61) showed that no difference existed among the four stages with regard to technological function. Table 59 did not exhibit significant difference between the presence and portals stage ($p>.05$) and Table 61 displayed the same result between the portals and transactions integration stage ($p>.05$).

Table 57 The Frequency of Technological Function Features

		The website stage							
		Presence Stage		Portals Stage		Transactions Stage		Partial Enterprises Integration Stage	
		Count	Col %	Count	Col %	Count	Col %	Count	Col %
Photo Album & Gallery	NO	54	77.1%	70	75.3%	27	87.1%	8	66.7%
	YES	**16**	**22.9%**	**23**	**24.7%**	**4**	**12.9%**	**4**	**33.3%**
Virtual Tour	NO	68	97.1%	85	91.4%	24	77.4%	11	91.7%
	YES	**2**	**2.9%**	**8**	**8.6%**	**7**	**22.6%**	**1**	8.3%
Background Music	NO	67	95.7%	84	90.3%	27	87.1%	12	100.0%
	YES	**3**	**4.3%**	**9**	**9.7%**	**4**	**12.9%**		
Online Visitor Counter	NO	65	92.9%	88	94.6%	30	96.8%	11	91.7%
	YES	**5**	**7.1%**	**5**	**5.4%**	**1**	**3.2%**	**1**	8.3%
Dynamic Pictures	NO	61	87.1%	70	75.3%	25	80.6%	11	91.7%
	YES	**9**	**12.9%**	**23**	**24.7%**	**6**	**19.4%**	**1**	**8.3%**

Table 58 Technological Function Group Statistics: Presence vs. Portals

	The website stage	N	Mean	Std. Deviation	Std. Error Mean
Technological features sum	Presence Stage	70	.50	.737	.088
	Portals Stage	93	.73	.886	.092

Table 59 Technological Function T-Test: Presence vs. Portals

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Technological features sum	Equal variances assumed	.685	.409	-1.769	161	**.079**	-.23	.131	-.489	.027
	Equal variances not assumed			-1.816	159.351	.071	-.23	.127	-.483	.020

Table 60 Technological Function Group Statistics: Portals vs. Transactions Integration

	Three website stages: Presence, Portals, Transactions	N	Mean	Std. Deviation	Std. Error Mean
Technological features sum	**Portals Stage**	93	.73	.886	.092
	Transactions Stage	43	.67	.715	.109

Table 61 Technological Function T-Test: Portals vs. Transactions Integration

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Technological features sum	Equal variances assumed	.508	.477	.368	134	**.713**	.06	.154	-.248	.362
	Equal variances not assumed			.398	99.935	.691	.06	.143	-.226	.340

- **Legal & Social Awareness (3 items)**

The wine industry as a member of the alcohol products family is subject to special laws. In Canada, there is a legal minimum age for alcohol purchases and consumption which varies by province. Therefore, whether a website contains relevant legal information might, to some extent, demonstrate their awareness of such issues. At the same time, the absence of such information on a winery's website does not indicate ignorance of the law. The same consideration applies to the areas of copyright and privacy statements.

In Rao's work, legal considerations were mentioned as one of the barriers for the websites in the transactions integration stage. For instance, if international trade would be implemented on the website, international laws and related privacy and copyright issues in the partners' country would need to be obeyed. In this study, the author conducted a census of Canadian wineries' websites and investigated the number of websites that have listed related information. These results could be used by government agencies to design new policies. The legal, privacy and copyright issues were assessed by using a 4-point scale that developed by summing across the 3 dichotomous variables in this category. For instance, if the website has two of the three features, the value for the ratio variable is two. If it has none, then the value is zero.

Scale: 0 1 2 3

1) Website Copyright Statement
2) Legal Notice
3) Privacy Statement

Table 62 shows that 7.1% of the websites in the presence stage contained legal notices, and wineries with a website in a higher stage seemed more likely to display the legal and social related information on the website than those in the lower stages. Each of the features listed above seems to increase in use in the subsequent stage. Independent sample T-tests were used to fully test the difference between each pair of the stages: presence and portals, portals and transactions integration. Table 64 showed a significant difference between the presence and portals stage ($p<.001$). Table 66 did not show any difference between the portals and transactions integration stage ($p>.05$). The legal and social awareness feature is significantly different between the presence and portals stage, but not significantly different between the portals and transactions integration stage.

The phenomenon discovered here could facilitate future research to combine the legal, social and human rights issues with the revised website stage model presented in this study.

Table 62 The Frequency of Legal & Social Awareness

		The website stage							
		Presence Stage		Portals Stage		Transactions Stage		Partial Enterprises Integration Stage	
		Count	Col %	Count	Col %	Count	Col %	Count	Col %
Legal Notice	NO	65	92.9%	79	84.9%	24	77.4%	9	75.0%
	YES	**5**	**7.1%**	**14**	**15.1%**	**7**	**22.6%**	**3**	**25.0%**
Website Copyright Statement	NO	48	68.6%	42	45.2%	12	38.7%	7	58.3%
	YES	**22**	**31.4%**	**51**	**54.8%**	**19**	**61.3%**	**5**	**41.7%**
Privacy Statement	NO	70	100.0%	80	86.0%	23	74.2%	6	50.0%
	YES			**13**	**14.0%**	**8**	**25.8%**	**6**	**50.0%**

Table 63 Legal Issue Group Statistics: Presence vs. Portals

	The website stage	N	Mean	Std. Deviation	Std. Error Mean
Legal & Copyright & Privacy sum	Presence Stage	70	.39	.597	.071
	Portals Stage	93	.84	.784	.081

Table 64 Legal Issue T-Test: Presence vs. Portals

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Legal & Copyright & Privacy sum	Equal variances assumed	2.130	.146	-4.032	161	**.000**	-.45	.112	-.675	-.231
	Equal variances not assumed			-4.187	160.973	.000	-.45	.108	-.667	-.239

Table 65 Legal Issue Group Statistics: Portals vs. Transactions Integration

	Three website stages: Presence, Portals, Transactions	N	Mean	Std. Deviation	Std. Error Mean
Legal & Copyright & Privacy sum	Portals Stage	93	.84	.784	.081
	Transactions Stage	43	1.12	1.096	.167

Table 66 Legal Issue T-Test: Portals vs. Transactions Integration

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Legal & Copyright & Privacy sum	Equal variances assumed	6.287	.013	-1.684	134	**.094**	-.28	.165	-.603	.048
	Equal variances not assumed			-1.494	62.650	.140	-.28	.186	-.649	.094

- **Winery Characteristics**

The development of family businesses relies heavily on the relationships they have built, and their ways of creating such relationships also apply to all other business (Petzinger 1999). Recently conducted research of family businesses with regard to customer relationship management reported that those businesses believe that good customer service is an essential component of their company development (Cooper, Upton and Seaman, 2005). One of the main research issues in this study is the virtual relationships that are demonstrated by wineries' websites. Therefore, the content feature of whether the winery is family owned was selected. Rao's article mentioned that culture and language issues were barriers to the websites in the portals stage. By assessing all Canadian wineries' websites, it is possible to answer whether this is a barrier only to websites in the portals stage, or in later stages as well.

1) Family-owned business or not
2) Language used on the website

Table 67 depicts that 52.9% of the websites in the presence stage labeled the wineries as family-owned businesses, while only 25% in the partial enterprise stage said so. Again, this study cannot identify why such features increased across stages. However, future research could determine the relationships among small businesses, family-owned businesses and the way they use Internet and website tools.

The majority of Canadian wineries used English only in their websites. Yet a winery's website in the portals stage could rely on an online translation tool to offer other

languages to their browsers. Such technology allows the customers to translate the whole website into the language that they prefer. The author only found one website that implemented this function. On this website, if a customer clicks on a Spanish button, the whole website will appear in Spanish. This approach could be used by small wineries for its convenience and cost-saving. The results demonstrated that 93.2% wineries' websites use English only. Within the 206 websites, only 11 of them use two languages and 3 use more than three languages. If Canadian wineries plan to entry into the global marketplace, using diverse languages on the website might be an issue that needs to take into account.

Table 67 The Frequency of Winery Characteristics

		The website stage							
		Presence Stage		Portals Stage		Transactions Stage		Partial Enterprises Integration Stage	
		Count	Col %	Count	Col %	Count	Col %	Count	Col %
Family Owned	NO,	33	47.1%	53	57.0%	17	54.8%	9	75.0%
winery.	YES	**37**	**52.9%**	**40**	**43.0%**	**14**	**45.2%**	**3**	**25.0%**
Number of different	One language	**62**	**88.6%**	**88**	**94.6%**	**30**	**96.8%**	**12**	**100.0%**
Languages has been	Two languages	6	8.6%	4	4.3%	1	3.2%		
used on the website.	Three languages	2	2.9%						
	Five languages			1	1.1%				

7. Discussion and Conclusion

Results from the above-mentioned analysis suggested that this study successfully extended Rao's model from four stages to five (Rao, Metts and Monge, 2003) by adding a new stage named "Market Integration." The statistical results show that Market Integration features increase in use across the four website stages in Rao's model. Thus, Hypothesis 1b has been supported. The transactions integration stage was successfully separated into indirect and direct levels. A sizeable number of wineries were grouped into these two categories, thus demonstrating the support of Hypothesis 2. Since no other research had been found which explores a website stage model for Canadian wineries, the present study filled this gap by modifying an existing website stage model and achieving a revised industry-specific model for Canada.

In answer to the research question, whether the content features on the website were equally distributed in each stage of Rao's model, or if some of them were more prominent in the early or later stages, the analysis found that the marketing function features increased in use across the website stage model just as market integration did. Wineries with a high level website stage included more marketing function features than lower level ones. The technological features did not increase in use across website stages. A website in a higher stage did not automatically guarantee the inclusion of more technological features than that in a lower level. Wineries with websites in a higher stage seemed more likely to exhibit pertinent legal and social issues on the website than those in a lower stage.

By analyzing the above-mentioned content features within the entire sample of Canadian wineries' websites, this study paved the way for the development of concrete web content features for industry-specific websites.

When developing the hypotheses, the expectation of the market integration features in H1b was that the proportion of the winery websites that have these features is higher in each subsequent stage. This hypothesis was successfully supported, and another interesting result had also emerged. The average features owned by the websites were also increased in each subsequent stage. For example, average market integration features in the presence stage was three, in the portals and transactions integration stage it was five and six respectively, and in the partial enterprises integration stage it turned out to be seven.

In this study of 369 Canadian wineries, 222 had a website. The percentage of wineries with websites was 60%, which demonstrated high involvement in Internet usage, especially when compared to Canadian small and medium-sized firms in other industries.

This study showed that among the 43 wineries grouped in the transactions integration stage, nineteen were in the indirect money transactions level. This result was consistent with what Rao's article claimed. The majority of wineries were still employing a third party for financial transactions instead of implementing the necessary online purchase functions themselves. However, these 43 wineries with online selling functions represented 20.9% of the 206 websites investigated. By comparison, other Canadian small and medium-sized firms in 2003 were found to have only 6% and 14% online purchase

capabilities respectively. Surprisingly, the percentage of 20.9 for Canadian wineries was also greater than that of large firms (see Table 3).

When analyzing their data four years ago, Rao et al. concluded that the enterprise integration stage is an ideal concept, which was hard to reach due to high technology requirements and overwhelming integration issues. This research confirmed that even now the same concern still exists. Within the 206 websites, none of them achieved the full enterprises integration stage while only 5.8% reached the partial enterprises integration level. Apparently, wineries still have a long way to go with regard to the website stage model described here.

Although the Internet is highly developed, some relationships still need to be created face-to-face instead of being fully dependent on electronic approaches (Geiger & Martin, 1999). This insight might help in answering why the majority of wineries do not have B2B, B2C and direct money transactions functions. Wine is a luxury product, and significant differences are not easily discerned by the average customer. Therefore, more personal involvement might facilitate wine sales.

Within the 206 websites, six of them displayed the information about social marketing events or campaigns held by the wineries. Therefore, in the wine industry, at least 2.9% wineries conducted such social marketing activities. Some websites include the information such as “The winery is wheelchair accessible”, which expresses the awareness of disabled population. All these contents demonstrate the social awareness on the websites.

7.1. Contributions

Firstly, this study presents an industry-specific website stage model for Canadian wineries. This new model combines both technology and market perspective. A clear definition of each stage for the revised model is provided, and a group of web functional features for each has been listed. Five new categories are achieved by referencing the web features listed in Canadian winery websites. They are market integration, technology functions, marketing functions, legal and social awareness and winery characteristics. Forty-nine features were examined in each of the websites, providing a practical instrument for the wineries to assess not only their own websites but also those of their competitors. In addition, these features extend the usage of the original model by incorporating content features from several different perspectives. A winery could use functional features to identify its website stage and content features to evaluate the overall features listed on the website from marketing to web sophistication and legal & social aspects.

Rao et al's research is mainly used to identify website stages as opposed to website improvement. Many barriers mentioned in Rao's study are beyond the control of the companies. Even a company willing to change might be unable to do so due to intractable obstacles. Their website stage features are of more interest to academics than practitioners. However, the content features identified in this study complement the original model by introducing practicable web items for wineries to evaluate their websites. Because most of the content features are presented from the marketing perspective, they can be easily used to upgrade a winery website without any extra investment in equipment or expertise, as they are under the winery's direct control. The company can easily decide whether its website should include information such as business hours, a map, or wine tasting, if there

is to be a copyright statement, legal notice, or privacy statement, or whether the website should present some simple but impressive features (e.g., photo album, virtual tour, or background music) to improve their image in the minds of their customers. Stabled web standards and customs in this framework could benefit future research (Bar-Ilan, 2005). This study is a good starting point for identifying web standards and customs in the wine industry which tends to be mainly small and medium-sized companies, another aspect worth researching.

Secondly, this investigation successfully tested the concept market integration, which is derived from cluster theory, by assessing the networks among wineries, the tourism cluster, and the food cluster. In previous research, the wine industry showed linkages to the food and tourism clusters, which has been confirmed here. The scope of the cluster has also been expanded by introducing more linkages, some to associations, such as wine associations, local commercial associations, and grape growing associations, and some to local attractions, accommodations, and transportation services providers. Many wineries mentioned such linkages on their websites. Therefore, some features presented in the research of the California wine cluster (Porter, 1998c) have been identified in this study as well. The significant difference of market integration in the regression model was mainly driven by internal market integration. The results showed that internal market integration features were significantly different among four stages; however, external market integration features were not.

Thirdly, the transactions integration stage has been successfully divided into indirect and direct levels. Based on Rao's interpretation, the companies in the transactions stage need to overcome technological obstacles and should have competent staff to maintain their e-

commerce business. For small and medium-sized wineries, the benchmark set by Rao for the transactions integration stage is complex and costly. However, Rao also claimed that small businesses could choose third party participation to complement their efforts. For example, online financial transactions could be offered to wine customers but the actual money changing hands could be channeled to the winery through an outside business. From this author's perspective, wineries which have all the Internet infrastructure and expertise to implement e-commerce should be distinguished from those who use a third party to conduct their money transactions. Although both of them end up with the funds required, their respective efforts are far different. In this study, indirect and direct financial transactions are successfully separated. This insight should help wineries identify themselves more accurately than does Rao's model. Any small or medium-sized business in the transactions stage will see its position more clearly by knowing that there are two levels in this stage. Companies in the indirect transactions stage will recognize their next step as the direct money transactions capability instead of the enterprises integration.

Fourthly, the industry-specific model for Canadian wineries filled a gap in the research domain. All revised stages have been successfully tested within the context of Canadian wineries. In addition, the revised model and the newly created web features can be generalized to the wine industry in different countries. Because it is part of the alcohol industry, both the model and the web features can be generalized to other members, such as breweries and distilleries, as well. In addition, the revised model could be generalized to other luxury goods and beyond since the combination of technology and marketing perspectives represents a contribution to all other businesses.

Fifthly, the results provide practical solutions not only to the 206 wineries who own a website, but also to the 148 wineries without websites for several reasons. For instance, all of them could evaluate the website stage of their competitors. As well, wineries with websites could advance the market function of their website. By using the 49 features developed in this study, they could differentiate what they have and what they do not. It requires no great effort for them to add desirable marketing features to their website if they wish to do so. In addition, wineries without a website will get a clear picture of the whole industry, including partners and competitors. If they do decide to create a website, all the features mentioned here could turn into a practical user guide for this effort.

Last but not least, this research is the first to provide a complete picture of Canadian winery websites. It helps government and industry associations to improve their level of understanding of the Internet implementation status of Canadian wineries in general. The results could be used by these organizations to create facilitating polices for the wineries. They could also be used to enforce networks among wine industry participants, and/or to inspire new marketing approaches to improve the overall competitive advantages in the wine industry.

7.2. Implications

Any Canadian winery can use the revised model to classify itself for comparison purposes with other wineries and their websites. Rao's model is focused on the technology aspect of a website. Rao, Metts and Monge (2003) admit that whether companies should pursue high website stages cannot be answered by the model itself. More factors need to be

considered before making such decisions. From a technical perspective, the more sophisticated functions the website offers, the better it will be perceived by any browser. However, from a marketing point of view, improving customer satisfaction, company benefits, and the reputation of the products might be more important than the implementation of some non-value-added technical functions. This study provides a wide overview for wineries who wish to evaluate their website. The revised model helps practitioners avoid a too-narrow focus and facilitates wise decisions.

Empirical features constructed in this study can be used to expand website content not only by wineries but also by providers of other luxury products. This study presents a useful guide for website upgrades for all Canadian wineries.

7.3. Limitations and Future Research

The primary limitation of this study is inherited from Rao's model. It is descriptive, not prescriptive, as is the revised model. Future research should utilize surveys and/or interviews to investigate the wineries' motivations for shaping their websites. It is important to find out whether they hope to achieve strategic goals, increase sales, improve services, and catch up to their competitors or a combination of these aspects.

The other limitation is from the quantitative content analysis method itself, which has been utilized here. Because most web features have been coded into nominal categories such as a Yes or No, rich information conveyed by words or sentences will be lost during this process. Although quantitative content analysis is suitable for conducting this research,

qualitative content analysis is still recommended for future research. Further analysis of different expressions of the same content and the underlying reasons is suggested.

Finally, due to language constraints, ten websites which only use French were excluded from this study's analysis. In future research of Canadian wineries, this author strongly suggests analyzing these websites.

7.4. Conclusion

An industry-specific website stage model has been proposed for Canadian wineries in particular. Market integration as a new concept has been added into the revised model and becomes stage five. Thorough statistical tests, including descriptive statistics, multinomial logistic regression and independent T-Test, suggested that market integration features increase in use across the four website stages depicted in Rao's model. The transactions integration stage has been successfully divided into indirect and direct levels. Sizable sample units of indirect and direct transactions demonstrate the success of the separation. A census of 206 Canadian winery websites was conducted to assess the revised model. Five new web feature categories were achieved by referencing the web features listed in Canadian wineries' websites. They are market integration, technology functions, marketing functions, legal and social awareness and winery characteristics. These features of the 206 websites were also analyzed. The regression results show that market integration, marketing functions, and legal and social awareness can successfully predict the website stage. Future research into the wineries' motivations for shaping their websites by utilizing surveys and/or interviews is suggested.

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APPENDICES

A. Canadian Wineries List

	Wineries	**Website**	**Province**
1.	Adora Estate Winery		British Columbia
2.	Alderlea Vineyard		British Columbia
3.	Andres Wines - Hillebrand Estates Winery	www.hillebrand.com/	Ontario
4.	Andres Wines - Peller Estates	www.peller.com/	Ontario
5.	Andres Wines_Web_1	www.andreswines.com	Ontario
6.	Andres Wines_Web_2	http://www.andreswines.com/index.htm	Ontario
7.	Angels Gate Winery	www.angelsgatewinery.com/	Ontario
8.	Angile		Quebec
9.	Annex Vintners		Ontario
10.	Applewood Farm Winery	www.applewoodfarmwinery.com	Ontario
11.	Archibald Orchards Winery	www.archibalds-estatewinery.on.ca	Ontario
12.	Arrowleaf Cellars	www.arrowleafcellars.com/	British Columbia
13.	Artisan Vinicole		Quebec
14.	Aspen Grove Cottage Winery Inc.	www.aspengrovewinery.com/	Saskatchewan
15.	Averill Creek Winery	www.averillcreek.ca/	British Columbia
16.	A'Very Fine Winery	www.averyfinewine.ca/	British Columbia
17.	Banach Winery		Saskatchewan
18.	Bella Vista Vineyards	www.bellavistawinery.ca/index.html	British Columbia
19.	Bellamere Country Market & Winery	www.bellamere.com	Ontario
20.	Belleisle Vineyards		New Brunswick
21.	Benchland Vineyards	www.benchlandwines.com/	British Columbia
22.	Benvin Enr		Quebec
23.	Bertrand Creek Farms		British Columbia
24.	Biere et Vin Chez Soi Enr		Quebec
25.	Birchwood Estate Wines	www.diamondwines.com/Birchwood	Ontario
26.	Birtch Farms Estate & Winery	www.birtchfarms.com	Ontario

	Wineries	Website	Province
27.	Black Hills Estate	http://blackhillswinery.com/	British Columbia
28.	Black Prince Winery	www.blackprincewinery.com/	Ontario
29.	Blanshard St Winery		British Columbia
30.	Blasted Church Winery	www.blastedchurch.com/	British Columbia
31.	Blomidon Estates Winery		British Columbia
32.	Blossom Winery	www.blossomwinery.com/	British Columbia
33.	Blue Grouse Vineyards	www.bluegrousevineyards.com/	British Columbia
34.	Blue Heron Fruit Winery	www.blueheronwinery.ca/	British Columbia
35.	Blue Mountain Vineyards & Cellars	www.bluemountainwinery.com	British Columbia
36.	Bonaparte Bend Winery	www.bbwinery.com	British Columbia
37.	Bourg Royal		Quebec
38.	Brasseur Cellier Enr		Quebec
39.	Brights Wines Ltd		Ontario
40.	Brus' Orchards Winery	www.execulink.com/~brus/	Ontario
41.	Burrowing Owl Vineyards	www.bovwine.com	British Columbia
42.	By Chadsey's Cairns Winery & Vineyard	www.bychadseyscairns.com	Ontario
43.	Cabot Wineries		Nova Scotia
44.	Calliope Handcrafted Wines	www.calliopewines.com	British Columbia
45.	Calona Vineyards	www.calona.kelowna.com	British Columbia
46.	Carmela Estates Winery	http://www.carmelaestates.ca/	Ontario
47.	Caroline Cellars Winery	www.lakeitfarms.com/	Ontario
48.	Carolinian Winery	http://www.carolinianwinery.com/	Ontario
49.	Carriage Hill Estate Winery		British Columbia
50.	Carriage House Wines	www.carriagehousewines.ca/	British Columbia
51.	Cartier Wines & Beverages Corp.		Ontario
52.	Cave Springs Cellars	www.cavespringcellars.com/	Ontario
53.	CedarCreek Estate Winery(Greata Ranch Vineyards)	www.cedarcreek.bc.ca	British Columbia
54.	Cep d' Argent		Quebec
55.	C'est What Wine	www.cestwhat.com	Ontario
56.	Chadsey's Cairns Winery & Vineyard		Ontario
57.	Chalet Estate Vineyard	www.chaletestatevineyard.ca/	British Columbia
58.	Chase & Warren Estate Winery Vineyards		British Columbia
59.	Chateau Bourget	www.chateaubourget.ca/en/	Ontario

	Wineries	Website	Province
60.	Chateau Des Charmes Wines Ltd	www.chateaudescharmes.com	Ontario
61.	Chateau Wolff		British Columbia
62.	Cherry Point Vineyards	www.cherrypointvineyards.com/	British Columbia
63.	Church and State Wines(Victoria Estate Winery)	www.churchandstatewines.com/(Opening Soon)	British Columbia
64.	Cidrerie & Vergers St-Nicolas		Quebec
65.	Cilento Wines	http://cilento.sites.toronto.com/	Ontario
66.	Clos de la Montagne	www.closdelamontagne.com/	Quebec
67.	Clos St. Denis, Verger-Vignoble	http://www.clos-saint-denis.qc.ca/english/	Quebec
68.	Closson Chase Vineyards Inc		Ontario
69.	Colchester Ridge Estate		Ontario
70.	Colio Estate Wines	www.colio.com	Ontario
71.	Columbia Gardens Winery	www.cgwinery.com/	British Columbia
72.	Colunbia Valley Classics Fruit Winery		British Columbia
73.	Coop¨¦rative de producteurs		Quebec
74.	Corcoran Berry Farm & Carolinian Winery		Ontario
75.	Cox Creek Cellars Inc.	www.coxcreekcellars.on.ca/	Ontario
76.	Coyote's Run Estate Winery	www.coyotesrunwinery.com/	Ontario
77.	Cranbrook Vineyards Ltd		British Columbia
78.	Creekside Estate Winery	http://www.creeksidewine.com/main.html	Ontario
79.	Crown Bench Estates Winery	www.crownbenchestates.com	Ontario
80.	Crowsnest Vineyards	www.crowsnestvineyards.com/	British Columbia
81.	Cuesta Estates		Ontario
82.	Culotta Grapes & Darrigo's Grape Juice Ltd		Ontario
83.	Cumberland Winery		British Columbia
84.	D.D.LeoBard Winery	www.ddleobardwinery.com/	Manitoba
85.	D'Angelo Estate Winery	www.dangelowinery.com/	Ontario
86.	Daniel Lenko Estate Winery	www.daniellenko.com/	Ontario
87.	Dark Cove Cottage	www.dccw.ca/	Newfoundland

	Wineries	Website	Province
	Winery		and Labrador
88.	D'Asolo Vineyards		British Columbia
89.	Davino Estate Winery		British Columbia
90.	de l'Aurore boreale		Quebec
91.	De Sousa Wine Cellars	www.desousawines.com/	Ontario
92.	des Pins		Quebec
93.	Desert Hills Estate Winery	http://www.deserthills.ca/	British Columbia
94.	Dietrich-Jooss		Quebec
95.	Divino Estate Winery Ltd.		British Columbia
96.	Domaine Combret	www.combretwine.com	British Columbia
97.	Domaine de Chaberton	www.domainedechaberton.com/	British Columbia
98.	Domaine De Grand Pre	www.grandprewines.ns.ca/	Nova Scotia
99.	Domaine des Cotes d'Ardoise		Quebec
100.	Domaine Felibre	www.domainefelibre.com/	Quebec
101.	Domaine Renegade		British Columbia
102.	Domaine Vagners		Ontario
103.	Downey's Estate Winery	http://www.downeysfarm.on.ca/content/downeys-estate-winery.shtml	Ontario
104.	Dumont Vins & Spiritueux		Quebec
105.	D'Vine Wine International Inc.	www.dvinewine.com/	Ontario
106.	East Kelowna Cider Company		British Columbia
107.	EastDell Estates Winery	www.eastdell.com	Ontario
108.	Echo Valley Vineyards	www.echovalley-vineyards.com/	British Columbia
109.	Edgemont Village Wines		British Columbia
110.	Elephant Island Fruit Winery	www.elephantislandwine.com	British Columbia
111.	Entre-Pots du Vin		Quebec
112.	Erie Shore Vineyard	www.erieshore.ca/	Ontario
113.	Estevenez Private Winery Inc		Ontario
114.	Fairview Cellars		British Columbia
115.	Featherstone Estate Winery	www.featherstonewinery.ca	Ontario
116.	Fellini Fine Wines		Ontario
117.	Ferme Bourgeois Farms	www.fermebourgeoisfarms.ca/	New Brunswick
118.	Ferndale Vineyards	www.champanade.ca	Ontario
119.	Fielding Estate Winery	http://www.fieldingwines.com/	Ontario

	Wineries	Website	Province
120.	First Estate Cellars		
121.	Flat Rock Cellars	www.flatrockcellars.com	Ontario
122.	Flynn's Winery & Distillery		Newfoundland and Labrador
123.	Focus Okanagan Valley		British Columbia
124.	Frogpond Farm	www.frogpondfarm.ca	Ontario
125.	Gagetown Cider Company		New Brunswick
126.	Gary Oaks Winery	http://garryoakswine.com/	British Columbia
127.	Gaspereau Vineyards	www.nswine.ca	Nova Scotia
128.	Gehringer Brothers Estate		British Columbia
129.	George Smith Vineyards		Ontario
130.	Gerard's winery		Ontario
131.	Gersighel Wineberg		British Columbia
132.	Glen Echo Vineyards		British Columbia
133.	Glenterra Vineyards		British Columbia
134.	Glenugie Winery	www.glenugiewinery.com	British Columbia
135.	Godfrey-Brownell Vineyards	www.gbvineyards.com/	British Columbia
136.	Golden Mile Cellars	www.goldenmilecellars.com/	British Columbia
137.	Grange of Prince Edward Inc	www.thegrangewines.com/	Ontario
138.	Granite Creek Winery	http://www.granitecreek.ca/	British Columbia
139.	Grape Tree Estate Wines	www.grapetreewines.com/	Ontario
140.	Gray Monk Estate Winery	www.graymonk.com	British Columbia
141.	Grenier-Martel		Quebec
142.	Habitant Vineyards		Nova Scotia
143.	Hainle Vineyards Estate Winery	www.hainle.com	British Columbia
144.	Harbour Estates Winery	www.hewwine.com	Ontario
145.	Harmony-One Vineyards		British Columbia
146.	Harvest Estate Wines	www.harvestwines.com/	Ontario
147.	Hawthorne Mountain Vineyards	www.hmvineyard.com	British Columbia
148.	Henry of Pelham Estate Winery	www.henryofpelham.com/	Ontario
149.	Herder Winery & Vineyards	www.herder.ca/	British Columbia
150.	Hernder Estates Winery	www.hernder.com/	Ontario
151.	Hester Creek Estate Winery	www.hestercreek.com	British Columbia

	Wineries	Website	Province
152.	Hidden Bench Vineyards	www.hiddenbench.com (under development.)	Ontario
153.	Hillside Estate Winery	www.hillsideestate.com/	British Columbia
154.	Honeymoon Bay Blackberry Winery		British Columbia
155.	Hornby Island Winery		British Columbia
156.	House of Rose		
157.	House Of Rose Vineyards & Winery		British Columbia
158.	Huff Estates Winery Inc	www.huffestates.com/main.html	Ontario
159.	Hunting Hawk Vineyards	www.huntinghawkvineyards.com/	British Columbia
160.	Hydromelerie Rucher les Saules		Quebec
161.	Inkameep Vineyards		British Columbia
162.	Inniskillin Wines Inc	www.inniskillin.com	Ontario
163.	Jackson Triggs Winery	www.jacksontriggswinery.com/en/	Ontario
164.	Joie Wines	http://www.joie.ca/wines.htm#	British Columbia
165.	Joseph's Estate Wines	www.josephsestatewines.com	Ontario
166.	Jost Vineyards	www.jostwine.com/	Nova Scotia
167.	Jun'eau inc.		Quebec
168.	Kacaba Vineyards Inc	www.kacaba.com/	Ontario
169.	Kawartha Country Wines	www.kawarthacountrywines.ca/	Ontario
170.	Kettle Valley Winery	www.kettlevalleywinery.com/	British Columbia
171.	Kings Court Winery		Ontario
172.	Kittling Ridge Winery	www.kittlingridge.com/	Ontario
173.	Konzelmann Estate Winery	www.konzelmannwines.com	Ontario
174.	la Bauge		Quebec
175.	La Compagnie Seagram		Quebec
176.	La Ferme Maury		New Brunswick
177.	La Frenz	www.lafrenzwinery.com/	British Columbia
178.	Lailey Vineyard Wines Inc	www.laileyvineyard.com/	Ontario
179.	Lake Breeze Vineyards	http://www.lakebreeze.ca/	British Columbia
180.	Lakeview Estates Cellars	www.lakeviewcellars.on.ca/	Ontario
181.	Lang Vineyards	www.langvineyards.com	British Columbia
182.	Larch Hills Winery	www.larchhillswinery.bc.ca	British Columbia
183.	Laughing Stock Winery	www.laughingstock.ca	British Columbia
184.	Le Cep d'Argent Vineayrd	www.cepdargent.com/	Quebec
185.	Leaskdale Winery		Ontario
186.	Leblanc Estate Winery	www.leblancestatewinery.com (under construction)	Ontario

	Wineries	Website	Province
187.	LeClos Jordanne		Ontario
188.	Leduc-Piedimonte	www.leduc-piedimonte.com/	Quebec
189.	Legends Estate Winery	www.legendsestates.com/	Ontario
190.	Les Blancs Coteaux Enr		Quebec
191.	Les Chants de Vignes		Quebec
192.	Les Trois Clochers		Quebec
193.	Little Straw Vineyards	http://www.littlestraw.bc.ca/index.htm	British Columbia
194.	Long Dog Vineyard and Winery Inc.		Ontario
195.	Long Harboour Vineyards		British Columbia
196.	Lotusland Vineyards	http://www.lotuslandvineyards.com/	British Columbia
197.	Lunenburg County Winery	www.canada-wine.com/	Nova Scotia
198.	Magnotta Winery	www.magnotta.com/	Ontario
199.	Malahat Estate Winery		British Columbia
200.	Maleta Estate Winery	www.maletawinery.com/	Ontario
201.	Malivoire Wine Co Ltd	www.malivoirewineco.com	Ontario
202.	Maple Grove Vinoteca Estate Winery		Ontario
203.	Marley Farm Winery	www.marleyfarm.ca/	British Columbia
204.	Marshwood Estate Winery		British Columbia
205.	Marstronardi Estate Winery		Ontario
206.	Marynissen Estates	www.marynissen.com/	Ontario
207.	Mastrondard Estate Winery		Ontario
208.	McWines the Winemakers Ltd		British Columbia
209.	Meadow Lane Winery	www.meadowlanewinery.com/	Ontario
210.	Middle Mountain Mead		British Columbia
211.	Mike Weir Estates	http://www.weirwines.com/	Ontario
212.	Milan Wineries	www.milanwineries.com/	Ontario
213.	Millstone Estate Winery		British Columbia
214.	Mission Hill Winery	www.missionhillwinery.com	British Columbia
215.	Mistral Estate Winery	www.mistralestatewinery.com	British Columbia
216.	Monashee Vineyards		British Columbia
217.	Morning Bay Farm		British Columbia
218.	Morou	www3.sympatico.ca/morou/	Quebec
219.	Mosquito Creek		Ontario

	Wineries	Website	Province
	Vineyards		
220.	Mount Boucherie Estate Winery	www.mtboucherie.bc.ca	British Columbia
221.	Mountain Road Wine Company	www.mountainroadwine.com/	Ontario
222.	Munro Honey and Meadery	http://www.munrohoney.com/	Ontario
223.	Muscedere vineyards		Ontario
224.	Muskoka Lakes Winery	www.cranberry.ca/winery.html	Ontario
225.	Namaste Vineyards		British Columbia
226.	Nesher Wines		Ontario
227.	Newton Ridge Vineyards		British Columbia
228.	Niagara College Winery	http://www.nctwinery.ca/	Ontario
229.	Nichol Vineyard	www.nicholvineyard.com/	British Columbia
230.	Nk'Mip Cellars	www.nkmipcellars.com	British Columbia
231.	Noble Ridge Winery		British Columbia
232.	Norfolk Estate Winery		Ontario
233.	Notre Dame Wines	http://www3.nf.sympatico.ca/weilwinery/	Newfoundland and Labrador
234.	Oak Manor Estate Wines		Ontario
235.	Ocala Orchards Farm Winery	www.ocalawinery.com/	Ontario
236.	O'Daly's Brewing Emporium		Ontario
237.	Orofino Vineyards	http://www.orofinovineyards.com/	British Columbia
238.	Osoyoos Larose		British Columbia
239.	Palatine Hills Estate	www.palatinehillsestatewinery.com/	Ontario
240.	Paradise Ranch Wines	www.icewines.com/	British Columbia
241.	Peddlesden Wines		Ontario
242.	Pelee Island Winery	www.peleeisland.com/	Ontario
243.	Peninsula Ridge Estates Winery	www.peninsularidge.com/	Ontario
244.	Pentage Winery	http://www.pentage.com/	British Columbia
245.	Pereau Creek Winery		Nova Scotia
246.	Perkins Maplery		Quebec
247.	Pillitteri Estates Winery	www.pillitteri.com/	Ontario
248.	Pine Farms Cyder & Fruit Winery Inc		Ontario
249.	Pinot Reach Cellars		British Columbia
250.	Poplar Grove	www.poplargrove.ca/	British Columbia
251.	Prpich Vineyards		British Columbia
252.	Puddicombe Estate	puddicombefarms.com/winery/	Ontario

	Wineries	Website	Province
	Farms and Winery		
253.	Quai Du Vin Estate Winery Ltd	www.quaiduvin.com	Ontario
254.	Quails' Gate Estate Winery	www.quailsgate.com	British Columbia
255.	Raven Ridge Cidery Inc	http://www.k-l-o.com/raven/index.shtml	British Columbia
256.	Recline Ridge Vineyards and Winery	www.recline-ridge.bc.ca	British Columbia
257.	Red Rooster Winery	www.redroosterwinery.com	British Columbia
258.	Reif Estate Winery	www.reifwinery.com	Ontario
259.	Ridgepoint Wines	www.ridgepointwines.com/	Ontario
260.	Rigby Orchards Estate Wine		Manitoba
261.	Riverbend Vineyards		British Columbia
262.	Riverview Cellars Winery	www.riverviewcellars.com/	Ontario
263.	RNN Industries Inc		Ontario
264.	Roaming River Ranches	www.roamingriver.ca/	Alberta
265.	Robert Repko Vineyards		Ontario
266.	Roche Des Brises Inc		Quebec
267.	Rockway Glen Estate Winery Inc	www.rockwayglen.com	Ontario
268.	Rodrigues Markland Cottage Winery	www.rodrigueswinery.com/	Newfoundland and Labrador
269.	Rossignol Estate Winery	www.rossignolwinery.com/	Prince Edward Island
270.	Royal Demaria Wines	www.royaldemaria.com	Ontario
271.	Rush Creek Wines Ltd	www.rushcreekwines.com/	Ontario
272.	Sainte Famille Wines	www.st-famille.com/	Nova Scotia
273.	Salt Spring Vineyard	www.saltspringvineyards.com/	British Columbia
274.	Sandbanks Estate Winery		Ontario
275.	Sandhill Wines	www.sandhillwines.ca	British Columbia
276.	Sanson Estate Winery	http://www.littlefatwino.com/sanson.html	Ontario
277.	Saturna Vineyard	www.saturnavineyards.com/	British Columbia
278.	Scherzinger Vineyards	www.scherzingervineyards.com/	British Columbia
279.	Scotch Block Farm Winery	www.scotchblock.com/	Ontario
280.	Silver Sage Winery	www.silversagewinery.com/	British Columbia
281.	Skimmerhorn Winery		British Columbia
282.	Sonoran Estate Winery	www.sonoranestate.com	British Columbia
283.	Southbrook Farm Winery	www.southbrook.com/	Ontario

	Wineries	Website	Province
284.	Spiller Estate Fruit Winery	http://www.spillerestates.com/winery.spillerestates.com/index.htm	British Columbia
285.	Sprucewood Shores Estate Winery		Ontario
286.	St Jacobs Country Winery & Cidery Inc	www.barnowlcider.com/	Ontario
287.	St. Hubertus Estate Winery	www.st-hubertus.bc.ca	British Columbia
288.	St. Lazlo Estate Winery		British Columbia
289.	St. Urban Winery		British Columbia
290.	Stag's Hollow Winery	www.stagshollowwinery.com/	British Columbia
291.	Stonechurch Vineyards	www.stonechurch.com/	Ontario
292.	Stoney Ridge Estate Winery	www.stoneyridge.com	Ontario
293.	Strathmore Orchard and Winery		Ontario
294.	Stratus Vineyards	http://www.stratuswines.com/	Ontario
295.	Strewn Winery	www.strewnwinery.com	Ontario
296.	Sugarbush Vineyards Ltd	http://www.sugarbushvineyards.ca/	Ontario
297.	Sumac Ridge Estate Winery	www.sumacridge.com/	British Columbia
298.	Summerhill Estate Winery	www.summerhill.bc.ca	British Columbia
299.	Sunnybrook Farm Estate Winery	www.sunnybrookfarmwinery.com	Ontario
300.	Tawse Winery	www.tawsewinery.ca/	Ontario
301.	Telder Berry Wines	www.telderberrywines.com/	Nova Scotia
302.	The County Cider Company	www.countycider.com	Ontario
303.	The Fort Wine Co. Estate Winery	http://www.thefortwineco.com/	British Columbia
304.	The Thirteenth Street Wine Company	www.13thstreetwines.com/	Ontario
305.	The Valley Vine To Wine Company Ltd	http://vinetowine.ca/(Address doesn't work)	British Columbia
306.	Thetis Island Vineyards	http://www.cedar-beach.com/tivineyards.htm	British Columbia
307.	Thirsty Vintner Inc		British Columbia
308.	Thirty Bench Vineyard & Wines	www.thirtybench.com	Ontario
309.	Thomas & Vaughan Vintners	www.thomasandvaughan.com	Ontario

	Wineries	Website	Province
310.	Thornhaven Winery	www.thornhaven.com	British Columbia
311.	Through the Grapevine		Ontario
312.	Tierney Point Winery		New Brunswick
313.	Tinhorn Creek Vineyards	www.tinhorn.com	British Columbia
314.	Township 7 Vineyards and Winery	www.township7.com/	British Columbia
315.	Trillium Estates Winery		Ontario
316.	Trillium Hill Estate	www.trilliumhillwinery.com/(Site Suspended)	Ontario
317.	Trilogy Wine Merchants		Ontario
318.	Tuddenham Farms		New Brunswick
319.	Tugwell Creek Meadery		British Columbia
320.	Venturi-Schulze Vineyards	www.venturischulze.com/	British Columbia
321.	Vicori Winery		British Columbia
322.	Victoria Estate Winery	http://www.victoriaestatewinery.com/location.html	British Columbia
323.	Vieux Moulin (Hydromellerie du)	www.geocities.com/vieuxmoulin/	Quebec
324.	Viewpointe Estate Winery	http://www.viewpointewinery.com/	Ontario
325.	Vigneti Zanatta	www.zanatta.ca/	British Columbia
326.	Vignoble Angile		Quebec
327.	Vignoble Cappabianca	http://www.littlefatwino.com/vc.html	Quebec
328.	Vignoble Carone Vineyard		Quebec
329.	Vignoble de La Sabli¨¦re		Quebec
330.	Vignoble de L'Orpailleur	www.orpailleur.ca/	Quebec
331.	Vignoble de Sainte-Petrronille		Quebec
332.	Vignoble des Negondos	www.negondos.com/	Quebec
333.	Vignoble Domaine de l'Ardennais	http://www.vignobledelardennais.com/	Quebec
334.	Vignoble Domaine Royarnois	www.royarnois.com	.
335.	Vignoble du Marathonien	www.marathonien.qc.ca	Quebec
336.	Vignoble Isle de Bacchus	www.isledebacchus.com/vignoble/bienvenue.html	Quebec
337.	Vignoble le de l'Engonlevent		Quebec
338.	Vignoble Le Moulin du Petit Pr¨¦		Quebec

	Wineries	Website	Province
339.	Vignoble Leroryer/St-Pierre		Quebec
340.	Vignoble Les Arpents de Neige		Quebec
341.	Vignoble les Pervenches	www.lespervenches.com	Quebec
342.	Vignoble Sous Les Charmilless		Quebec
343.	Village Winery	www.villagewinery.com/	British Columbia
344.	Vin artisanal Le Ricaneux	www.ricaneux.com/visite.htm	Quebec
345.	Vin et Bi¨¨re Chez-Soi		Quebec
346.	Vin Passion/The Case for Wine		Ontario
347.	Vinbon Clarington		Ontario
348.	Vincor International Inc	www.vincorinternational.com/	Ontario
349.	Vine Court Estate Winery		Ontario
350.	Vineland Estates Winery Ltd	www.vineland.com/	Ontario
351.	Vineyard at Bowen Island	www.vineyard.bc.ca/ (Address does not work.)	British Columbia
352.	Vino Winemaker	www.vinowinemaker.com/	Ontario
353.	Vinoteca Winery	www.toronto.com/infosite/128701/1.shtml	Ontario
354.	Vins Andres Du Quebec Ltee		Quebec
355.	Vins d'Antan Enr		Quebec
356.	Vintage Brew		Ontario
357.	Vintners Winery		Ontario
358.	Waupoos Estates & Winery	www.waupoosestateswinery.com	Ontario
359.	Weil Winery	www.weilwinery.com/	Newfoundland and Labrador
360.	Wellbrook Winery	http://www.wellbrookwinery.com/	British Columbia
361.	Westham Estate Wineries Inc		British Columbia
362.	Whittamore's Berry Farm & Winery		Ontario
363.	Wild Goose Vineyards & Winery	www.wildgoosewinery.com	British Columbia
364.	Wiley Brothers Farm		Ontario
365.	Williamsdale Winery		Nova Scotia
366.	Willow Heights Winery	www.willowheightswinery.com/	Ontario

	Wineries	Website	Province
367.	Willow Springs Farms & Winery	www.willowspringswinery.ca	Ontario
368.	Winchester Cellars		British Columbia
369.	Winegarden Estate		New Brunswick

B. Unanalysed Wineries Websites List

Winery Code	Reason for exclusion
1. UAD	Opening Soon.
2. UAD	French only, no English.
3. UAD	English website does not work, only French website works.
4. UAD	Under development.
5. UAD	Under construction.
6. UAD	Website address does not work.
7. UAD	Site Suspended.
8. UAD	French only, no English.
9. UAD	French only, no English.
10. UAD	French only, no English.
11. UAD	French only, no English.
12. UAD	French only, no English.
13. UAD	French only, no English.
14. UAD	French only, no English.
15. UAD	French only, no English.
16. UAD	Website address does not work.

C. Pre-test Data List

	Winery Name	Website address	Province
1. PTD	A' Very Fine Winery	www.averyfinewine.ca	British Columbia
2. PTD	Angels Gate Winer	www.angelsgatewinery.com	Ontario
3. PTD	Aspen Grove Cottage Winery Inc.	www.aspengrovewinery.com	Saskatchewan
4. PTD	Benchland Vineyards	www.benchlandwines.com	British Columbia
5. PTD	Black Prince Winery	www.blackprincewinery.com	Ontario
6. PTD	British Columbia	British Columbia	British Columbia
7. PTD	Chalet Estate Vineyard	www.chaletestatevineyard.ca	British Columbia
8. PTD	Cox Creek Cellars Inc.	www.coxcreekcellars.on.ca	Ontario
9. PTD	D.D.LeoBard Winery	www.ddleobardwinery.com	Manitoba
10. PTD	Domaine De Grand Pre	www.grandprewines.ns.ca	Nova Scotia
11. PTD	Erie Shore Vineyard	www.erieshore.ca	Ontario
12. PTD	Ferme Bourgeois Farms	www.fermebourgeoisfarms.ca	New Brunswick
13. PTD	Gary Oaks Winery	http://garryoakswine.com	British Columbia
14. PTD	Leduc-Piedimonte	www.leduc-piedimonte.com	Quebec
15. PTD	Roaming River Ranches	www.roamingriver.ca	Alberta
16. PTD	Rodrigues Markland Cottage Winery	www.rodrigueswinery.com	Newfoundland and Labrador
17. PTD	Rossignol Estate Winery	www.rossignolwinery.com	Prince Edward Island
18. PTD	Silver Sage Winery	www.silversagewinery.com	British Columbia
19. PTD	St Jacobs Country Winery & Cidery	www.bellavistawinery.ca/index.html	Ontario
20. PTD	The Thirteenth Street Wine Company	www.13thstreetwines.com	Ontario

D. Coding Form and Coding Book

Coding Form

Number	Variable	Explanation
•	wineries	The winery's name
•	website	The winery's website address
•	province	The winery's location by province
1.	abwinery	Presence - Website includes information about the winery.
2.	abproduc	Presence - Website includes information about the wine products or services.
3.	contact	Presence - Website includes contact information.
4.	listemai	Presence - Email list on the website
5.	orderpla	Portals - Order Placing
6.	onlifeed	Portals - Online Feedback function on the Website
7.	search	Portals - Search Function on the Website
8.	sitemap	Portals - Site map or Site Index
9.	linkemai	Portals - Email hyperlink
10.	dir_tran	Transactions - Direct money transactions
11.	indir_tr	Transactions - Indirect money transactions through 3rd party website
12.	b2b	Transactions - Business to Business
13.	b2c	Transactions - Business to Customers
14.	communit	Transactions - Communities (membership club, mailing list, chat room, discussion forum and bulletin board)
15.	e_market	Transactions - E-Marketplace on winery website
16.	emark3	Transactions - Hyperlink to or content about 3rd party E-Marketplace
17.	auction	Transactions - E-auction on winery website
18.	tour_in	Market Integration - Internal Tour activity provided by wineries
19.	wine_tas	Market Integration - Internal Wine tasting provided by wineries
20.	tour_out	Market Integration - External Hyperlink to or content about Tour agencies held by other companies
21.	food_in	Market Integration - Internal Food services provided by wineries

22.	food_out	Market Integration - External Hyperlink to or content about Restaurants held by other companies
23.	store_in	Market Integration - Internal Wine shop held by wineries
24.	store_ou	Market Integration - External Hyperlink to or content about Wine shop held by other companies
25.	accom_in	Market Integration - Internal Accommodation provided by wineries
26.	accom_ou	Market Integration - External Hyperlink to or content about Accommodation provided by other companies
27.	associat	Market Integration - External Hyperlink to or content about Associations
28.	webdesig	Market Integration - External Hyperlink to or content about Website design company
29.	transpor	Market Integration - External Hyperlink to or content about Transportation service providers.
30.	e-group	Market Integration- External Hyperlink or content about other organizations create an e-group demonstrates cluster linkages.
31.	familyow	Family Owned winery.
32.	language	Different Languages have been used on the website.
33.	photoalb	Photo Album/Gallery (Demonstrate Technology Feature)
34.	virtual	Virtual Tour on Website (Demonstrate Technology Feature)
35.	voice	Background Music of Website (Demonstrate Technology Feature)
36.	visitcou	Online Visitor Counter (Demonstrate Technology Feature)
37.	dyna_pic	Dynamic pictures & Flash effects & Moving pictures or words (Demonstrate Technology Feature)
38.	newslett	Newsletters about the Winery (Demonstrate Marketing Feature)
39.	press_re	Press Release (Demonstrate Marketing Feature)
40.	events	Events hold by winery (Demonstrate Marketing Feature)
41.	tollfree	Toll Free (Demonstrate Customer Care Feature)
42.	openhour	Open Hours (Demonstrate Customer Care Feature)
43.	cuslabel	Customize wine label for customers (Demonstrate Customer Care Feature)
44.	tas_reci	Tasting Notes & Recipes (Demonstrate Customer Care Feature)
45.	award	The Awards of the Wines (Demonstrate Marketing Advertisement Feature)
46.	map	The Map shows winery's location (Demonstrate Customer Care Feature)
47.	copyrigh	Website Copyright Statement

48.	legalsta	Legal Notice
49.	privacy	Privacy Statement

- **Coding Book**

1. abwinery Presence - Website includes information about the winery.

If the website includes the introduction of the winery, the winery's history, the vineyard, or the similar information choose "1.Yes" for this item, otherwise choose "0. No".

Usually related information can be found under category "About Us/Winery/History" on the website.

2. abproduc Presence - Website includes information about the products or services.

If the website includes information about the products or services, such as wine products, wine tasting service, touring service, food services, and accommodation services, choose "Yes" for this item, otherwise choose "No".

Usually related information can be found under category "Wine/Our Wine/About Wine/Wine List".

3. contact Presence - Website includes contact information.

If the website includes contact information, such as telephone number, mailing address, fax number and email address, choose "Yes" for this item, otherwise choose "No".

Usually related information can be found under category "Contact us/Find us" .

4. listemai Presence - Email list on the website

If email address has been listed on the website, choose "Yes" for this item, otherwise choose "No".

Usually related information can be found under category "Contact us/Find us" or on the homepage. Notes: you can collect data for "4. listemai" and "9. linkemai" at the same time.

5. orderpla Portals - Order Placing

If the website provides the way of ordering wine by online interactive ordering, by filling the online form or by sending email to the winery, choose “Yes, online”.

If the website provides the way of ordering wine by calling the winery or by faxing the form to the winery, choose “Yes, offline”.

If the website provides any of the offline methods combining with any of the online methods, choose “Yes, both online and offline.”

If the website includes other ways to order the wine besides the methods mentioned above, choose “Yes” (please make a note about what the method is) for this item; otherwise choose “No” for this item.

Usually related information can be found under category “Order Wine/Buy Wine/How to order”.

6. onlifeed Portals - Online Feedback function on the Website

If the website has online form that can be filled by the customers, such as product ordering form, customer feedback form, guest book, online survey, and online quiz, choose “Yes” for this item; otherwise choose “No”.

Usually online form can be found under category “Contact Us/Order Wine/Guest Book/Join Mail List/Join Wine Club”.

7. search Portals - Search Function on the Website

If the website has search function, choose “Yes” for this item; otherwise choose “No”.

8. sitemap Portals - Site Map or Site Index

If the website has site map or site index, choose “Yes” for this item; otherwise choose “No”.

9. linkemai Portals - Email hyperlink

If email address listed on the website is a hyperlink, and customers can send email to the winery by directly clicking it, choose “Yes” for this item; otherwise choose “No” for this item. When you put the mouse on the email address, it shows a hand, it is a hyperlink.

Usually related information can be found under category “Contact us/Find us” or on the homepage. Notes: you can collect data for “4. listemai” and “9. linkemai” at the same time.

10. dir_tran Transactions - Direct money transactions

If orderpla is “Yes, offline order” or “No”, choose “No” for this item.

If the online order did not require credit card information, or it says that the sales representative will contact the customer through phone, then choose “No” for this item.

If the customers can order the wines directly from the winery’s website and finish the payment without the sales representative’s involvement, choose “Yes” for this item.

If there are sentences, such as “You will be contacted and we will make arrangements for payment options and shipping methods with you by telephone.” on the website, choose “No” for this item. Direct money transaction is similar to online shopping, if customers can buy wine online by using credit card and finish the whole buying process on the winery’s website, then we say that the winery has direct money transaction function.

11. indir_tr Transactions - Indirect money transactions through 3rd party website

If the website tells the customers that the wines can be bought online at other websites and provides other website addresses, choose “Yes” for this item, otherwise choose “No”.

Usually if the website has hyperlink to Wine Country At Home (www.winecountryathome.com) / NiagaraPod (www.niagarapod.com)/ PayPal (www.paypal.com), choose “Yes” for this item.

12. b2b Transactions - Business to Business

If the website has shopping cart and check out functions that allow company customers to buy the products online, choose “Yes” for this item, otherwise choose “No”.

13. b2c Transactions - Business to Customers

If the website has shopping cart and check out functions that allow individual customers to buy the products online, choose “Yes” for this item, otherwise choose “No”.

14. communit Transactions - Communities (membership club, mailing list, chat room, discussion forum and bulletin board)

If the website has a mailing list, choose “Yes, Mail List”.

If the website has a wine club, choose “Yes, Wine Club”.

If the website has both a mailing list and a wine club, choose “Yes, Mail List and Wine Club”.

If the website has other communities such as discussion forum or bulletin board, choose “Yes” for this item and take a note for what the community is, otherwise choose “No”.

15. e_market Transactions - E-Marketplace on winery website

If the direct money transaction item is “No”, choose “No” for this item.

If the winery’s website shows products and prices, and the customers can buy the wines by using shopping cart and check out by credit card, choose “Yes” for this item.

16. emark3 Transactions - Hyperlink to or content about 3rd party E-Marketplace

If the indir_tr item is “No”, choose “No” for this item.

If the website tells the customers that the wines can be bought **online** at other websites and provides those website addresses, at the same time, the other website shows products and prices, and the customers can buy the wines by using shopping cart and check out by credit card when customers click those website addresses, choose “Yes” for this item, otherwise choose “No”.

Usually if the website has hyperlink to Wine Country At Home (www.winecountryathome.com) / PayPal (www.paypal.com) / NiagaraPod (www.niagarapod.com), choose “Yes” for this item.

17. auction Transactions - E-auction on winery website

If electronic auctions, where sellers follow traditional price setting and order implementing process to provide products or services to buyers through Internet, have been found on the website, choose “Yes” for this item, otherwise choose “No”.

18. tour_in Market Integration - Internal Tour activity provided by wineries

If the website has categories or words, such as Tour/Vineyard Tour/Tour & Wine Tasting, and the tour has been held by the winery itself, choose “Yes” for this item.

If the taste is free, choose “2. Yes, Free Tour.” If the taste is charged, choose “3. Yes, Charged Tour.”

Usually, if the tour is not held by the winery, the website will point that out and

provide the tour agency's website or contact information. In this situation, choose "No" for tour_in.

19. wine_tas Market Integration - Internal Wine tasting provided by wineries

If the website lists categories or words, such as Tasting/Wine Tasting/Tasting Room, and the tasting has been provided by the winery itself, choose "1. Yes" for this item. If the taste is free, choose "2. Yes, Free Taste." If the taste is charged, choose "3. Yes, Charged Taste."

20. tour_out Market Integration - External Hyperlink to or content about Tour agencies hold by other companies

If the website lists tour activities held by tour agencies and provides the tour agency's website or contact information, choose "Yes" for this item.

If the website contains hyperlink to Tour Agencies held by other companies, choose "Yes" for this item.

If the website includes introduction about Tour Agencies, choose "Yes" for this item.

21. food_in Market Integration - Internal Food services provided by wineries

If the website lists categories or words, such as The Vines Restaurant/Food/Banquet/Dinner/Lunch/Our Chef, and the food has been provided by the winery itself, choose "Yes" for this item, otherwise choose "No".

22. food_out Market Integration - External Hyperlink to or content about Restaurants held by other companies

If the website contains hyperlink to Restaurants held by other companies, choose "Yes" for this item. If the website includes introduction about those Restaurants, choose "Yes" for this item, otherwise choose "No".

23. store_in Market Integration - Internal Wine shop held by wineries

If the winery has real wine shop or gift shop, choose "Yes, offline store" for this item. For example, if the information, such as "wine shop/store open from 10am to 4pm", can be found online, treat the winery as having real wine shop/store.

If the website lists the products and prices, and the customers can add products into shop cart, and checks out the products, then choose "Yes, Online Store" for this item.

If the winery has both online and offline store, choose "Yes, Online Store & Offline Store".

24. store_ou Market Integration - External Hyperlink to or content about Wine shop held by other companies.

If the website contains hyperlink to or content about wine shops/stores held by other companies, choose "Yes" for this item, otherwise choose "No". Usually under "Where to buy" or "Retail Agencies" categories, related information about wine shop/store can be found.

25. accom_in Market Integration - Internal Accommodation provided by wineries

If categories or words, such as Winery Inn/Live in the winery/Indoor Accommodation, can be found on the website, and the accommodation has been provided by the winery itself, choose "Yes" for this item, otherwise choose "No".

26. accom_ou Market Integration - External Hyperlink to or content about Accommodation provided by other companies

If the website contains hyperlink to Inn or Hotel held by other companies, choose "Yes" for this item. If the website includes introduction about these Inn or Hotel, choose "Yes" for this item, otherwise choose "No".

27. associat Market Integration - External Hyperlink to or content about Associaations

If the winery contains hyperlink to an association, choose "Yes". If the website includes introduction about an association, choose "Yes" for this item, otherwise choose "No".

Usually if the website says a hyperlink is an association, choose "Yes". If you click the hyperlink and find out that the website is an association's website, choose "Yes". Following are some associations might be listed on the website.

- Canadian Vintners Association (www.canadianvintners.com)
- VQA (Vintners Quality Alliance) Ontario (www.vqaontario.com)
- The British Columbia Wine Institute (www.winebc.com)
- Wines of Canada (http://www.winesofcanada.com/)

28. webdesig Market Integration - External Hyperlink to or content about Website design company.

If the website contains the hyperlink to the company who designed this website, choose "Yes" for this item. If the website includes introduction about the website

design company, choose “Yes” for this item, otherwise choose “No”.

Usually, the hyperlink to the website design company can be found at the bottom part of the homepage.

29. transpor Market Integration - External Hyperlink to or content about Transportation service providers.

If the website contains the hyperlink to the transportation company, choose “Yes” for this item. If the website includes introduction about the transportation company, choose “Yes” for this item, otherwise choose “No”.

30. e-group Market Integration- External Hyperlink or content about other organizations create an e-group demonstrates cluster linkages.

If the website contains a group of hyperlinks, choose “Yes, Hyperlink” for this item. If the website lists a group of companies, choose “Yes, Content” for this item. If the website has both the content and hyperlinks, choose “Yes, Both Content and Hyperlink”.

Usually if the website has a category called “Link/Our Link/Sister Link/Related Link”, there are a group of hyperlinks there.

31. familyow Family Owned winery.

If the website has information such as “Family Owned, owned by a couple, by father and son, by brother and sister”, choose “Yes” for this item, otherwise choose “No”.

32. language Different Languages have been used on the website.

Write down the languages besides English that have been used by the winery’s website.

33. photoalb Photo Album/Gallery(Demonstrate Technology Feature)

When there is a specific category or item called Photo Album/Gallery/Images, and under these categories, there are several photos that have been posted on the website, choose “Yes” for this item, otherwise choose “No”.

34. virtual Virtual Tour on Website (Demonstrate Technology Feature)

If the website lists categories or words, such as Virtual Tour/Virtual Visit, choose “Yes” for this item, otherwise choose “No”.

35. voice Background Music of Website (Demonstrate Technology Feature)

If any voice, no matter it is the background music, people’s speech, or special mouse

click sound, can be heard from the website, choose “Yes” for this item. The reason I include this "voice" item is to demonstrate that some website has integrated technological features, such as background music, personalized introduction, movie clip about winery, special sound with mouse click, which can be distinguished from the normal mouse click sound set by Windows itself.

36. visitcou Online Visitor Counter (Demonstrate Technology Feature)

If the website includes visitor counter, choose “Yes” for this item, otherwise choose “No”.

Usually this feature can be found on the homepage or at the bottom part of the webpage.

37. dyna_pic Dynamic pictures & Flash effects & Moving pictures or words.(Demonstrate Technology Feature)

If the website has some dynamic effect on words or pictures, such as moving words, moving pictures, flash introduction, or pictures that fades in and fades out, choose “Yes” for this item, otherwise choose “No”.

38. newslett Newsletters about the Winery(Demonstrate Marketing Feature)

If the website lists categories or words, such as Newsletters/e-news, choose “Yes” for this item, otherwise choose “No”.

39. press_re Press Release(Demonstrate Marketing Feature)

If the website lists categories or words, such as Press Release or articles being published on newspapers or magazines, choose “Yes” for this item, otherwise choose “No”.

40. events Events hold by winery(Demonstrate Marketing Feature)

If the website lists categories or words, such as Events, choose “Yes” for this item, otherwise choose “No”.

41. tollfree Toll Free (Demonstrate Customer Care Feature)

If the website lists words such as Toll Free or telephone such as 1-800, 1-877, choose “Yes” for this item, otherwise choose “No”.

42. openhour Open Hours (Demonstrate Customer Care Feature)

If the website lists open seasonal, choose “1. Yes, Seasonal Open”

If the website lists open year around, choose “2. Yes, Year Around”

If the website lists open daily, choose “3. Yes, Daily Open”

43. cuslabel Customize wine label for customers (Demonstrate Customer Care Feature)

If the website includes sentences or words to demonstrate the customization issue, such as personalized Label, customize label, private label, and custom label, choose “Yes” for this item, otherwise choose “No”.

44. tas_reci Tasting Notes & Recipes(Demonstrate Customer Care Feature)

45. award The Awards of the Wines(Demonstrate Marketing Advertisement Feature)

If the website includes “Award” as a category, or if words, such as “medal”, “award” , can be found to describe the wine, choose “Yes” for this item, otherwise choose “No”.

46. map The Map shows winery's location(Demonstrate Customer Care Feature)

If the website includes a map, or provides a map for customers to download, choose “Yes” for this item, otherwise choose “No”.

47. copyrigh Website Copyright Statement

If the website includes sentences or words to demonstrate the copy right, choose “Yes” for this item, otherwise choose “No”.

48. legalsta Legal Notice

If the website includes sentences or words to demonstrate the legal issue, choose “Yes” for this item, otherwise choose “No”.

If the website includes the sentences, such as “Must be at least 19 years of age to purchase and receive wine”, choose “Yes”.

49. privacy Privacy Statement

If the website includes sentences or words to demonstrate the privacy issue, choose “Yes” for this item, otherwise choose “No”.

E. Excel Coding Spreadsheet

Winery's Name

	Variables	Examples	Web Addresses	Comments
1	abwinery	Do they have an ABOUT / HISTORY / THE VINEYARD section?		
2	abproduc	Do they have information about products, services, tours, accommodations?		
3	contact	Fax number, address, e-mail, etc?		
4	listemai	Is an e-mail address listed on the site?		
5	orderpla	Can you order wine online via online form or e-mail?(ONLINE) Does it direct you to call or fax in an order?(OFFLINE)		
6	onlifeed	Does it have fields where you can type feedback to the winery? ie. Guest book, online survey, feeback form, product order form.		
7	search	Does it have a SEARCH function for the website?		
8	sitemap	Does it have a SITEMAP or SITE INDEX?		
9	linkemai	If the site has e-mail(s) listed, are they hyperlinked?		
10	indir_tr	Does it provide links to other sites where you can buy/pay for their wine online? ie. Paypal, Wine Country at Home, Niagara Pod		
11	dir_tr	Does the site provide tools to allow complete online purchase without faxing or calling?		
12	b2b	Does it have a shopping cart, particular service for Business orders?		
13	b2c	Does it have a shopping cart, particular service for Customer orders?		
14	communit	Does the site feature a "Wine Club" (YES, Wine Club), a "Mailing List" (YES, MAILING LIST) or other items such as a		

Winery's Name

	Variables	Examples	Web Addresses	Comments
		Bulletin Board, Forum (YES)		
15	e-market	Can you order wine online, credit card payment, shopping cart and all?		
16	emark3	Does it provide links to other sites where you can buy/pay for their wine online? ie. Paypal, Wine Country at Home, Niagara Pod		
17	auction	Does the site have an e-auction?		
18	tour_in	Does the winery provide a tour at the vineyard? Distinguish between FREE, CHARGE, or just YES if it doesn't indicate.		
19	tour_out	Does it provide links to or info about other companies that offer tours? They don't have to necessarily be at their vineyard.		
20	food_in	Do they serve meals at the vineyard? This does not include Bed and Breakfasts -- it has to be food that anyone can buy.		
21	food_out	Do they have links to or info about restaurants not on their land?		
22	wine_tas	Do they have wine tasting someplace on their winery? Often part of tours. FREE, CHARGE, or just YES if it doesn't indicate.		
23	store_in	OFFLINE STORE = A real store at the winery; ONLINE STORE = If they have an online store with shopping cart; YES, OFFLINE & ONLINE.		
24	store_out	Does it have links to or info about wine stores that sell their wine? ie. Cold Beer and Wine Stores		
25	associat	Does it have a link to or info about an association? ie. Canadian Vitner's Ass., The BC Wine Institute, Wines of Canada		
26	accom_in	Does the winery have lodging on their premises, provide banquet halls and/or wedding facilities?		
27	accom_ou	Does it have a link to or info about a hotel, inn, or other accommodations not on the winery property?		
28	webdesig	Is their a link to or info about the web design company that created the site?		

Winery's Name

	Variables	Examples	Web Addresses	Comments
29	transpor	Does it have a link to or info about transport companies, such as a car rental company, VIA rail, etc.?		
30	e-group	Does the site provide a LINKS section? This may include several partner companies, associations, etc.		
31	familyow	Does the site indicate that the winery is FAMILY OWNED? It may say those words directly, or may just say something like ". . . owned by a brother and sister . . ." in the text.		
32	language	If the site has translation for another language, type in the name of the language.		
33	photoalb	Does the site have a photo album? This isn't one or two pics on a page, but a collection of pics.		
34	virtual	Does the site have a virtual tour? ie. through the vineyard, the store, etc.		
35	voice	Is there any music or voice or mouse click sound AT ANY POINT on this site?		
36	visitcou	Is there a counter?		
37	newslett	Is there a newsletter or e-newsletter you can sign up for?		
38	press_re	Does the site list or display articles written about the winery or provide press releases it has or will distribute to media?		
39	events	Does the site have a list of events?		
40	tollfree	Does the site include a toll-free number (1-800 / 866 / 877)?		
41	openhour	Does the site list hours of operation? SEASONAL OPEN = ie. hours from May to November only; YEAR ROUND = hours during each of the 12 months; OPEN DAILY = may not indicate months, just daily hours		
42	cuslabel	Does the winery provide a service that creates a custom/private label for your wine? ie. OLSON VINTAGE PORT		

Winery's Name

	Variables	Examples	Web Addresses	Comments
43	tas_recipe	Does it have recipes or tasting tips for their wine? Tasting tips are often with the listing of their wines.		
44	award	Does the site have a section or any other indication that they have won any awards or medals?		
45	map	Is there a map to the winery?		
46	copyrigh	Does the site have copyright © info? ie. This site is copyright 1991; or just ©.		
47	legalsta	Does the site have a written legal statement? This is often a hyperlink (Legal Statement) near the copyright.		
48	privacy	Does the site have a privacy statement? Similar to the legal statement.		
49	animation	Does the site feature ANY Flash or any other animation?		

F. E-mail Survey

Email Survey

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(Research Title: **A Revised Website Stage Model**.)

Please take 5 minutes to help me with my master's degree thesis research! Just answer 6 short survey questions regarding your company's website usage.

I would be happy to share my research results with you to thank you for your participation . The complete results of the study will be available in about four months. If you wish to obtain a copy of these results, you may contact me.

The information gathered will be used for research on investigating the website stage model. Participation in the survey is **voluntary**. I hope you will participate, but if for any reason you decide to withdraw, you are free to do so. Your responses will be **confidential**. No names or identities will be used in the published reports of the research. This project has received the authorization of the Faculty of Management at the University of Lethbridge in accordance to the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans.

If you have any questions about the study, please contact the investigator, *Ying Zhu* (email: *ying.zhu@uleth.ca*, Phone number: 403-382-7158) or the supervisor, *Dr. Debra Basil*, at *debra.basil@uleth.ca*. Questions of a more general nature may be addressed to the Office of Research Services, University of Lethbridge (Phone: 403-329-2747).

Thank you so much for your help!

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Survey Questions

1. **Does your company's website support direct online payment by allowing customers to use a credit card without interacting with your sales representative?**
   Yes_____.
   No_____.
   Please Explain:

2. **Does your company's website incorporate Customer Relationship Management (CRM) tools?** (CRM: manage customer relationships by collecting customer information, sending product information to customers or collecting customer feedback.)

   Yes_____.
   No_____.
   Please Explain:

3. **Does your company's website incorporate Supply Chain Management (SCM) tools?** (SCM: improving how you find raw production components, manufacturers and distributors.)

   Yes_____.
   No_____.
   Please Explain:

4. **Does your company's website incorporate Value Chain Management (VCM) tools?** (VCM: deliver maximum value to the end user for the least possible total cost.)

   Yes_____.
   No_____.
   Please Explain:

5. **Does your company use your website to work with other companies?**

   Yes_____.
   No_____.
   Please Explain:

6. **Does your company's website include any other advanced management and/or planning functions, besides those listed above?**

   Yes_____.
   No_____.
   Please Explain:

Thank you very much for your time!

You can request the results of this study by filling out the following Research Results Request Form. You can send it to me through email, at ying.zhu@uleth.ca.

Research Results Request Form

If you would like to receive a copy of the final results by email, please provide your name and email address.

Last Name: _____ First Name:_____

Email:_____ .

G. Telephone Survey

TELEPHONE SURVEY SCRIPT

Hello, my name is Ying. I am a Master's student from the University of Lethbridge. I am doing a very short survey about the websites of Canadian Wineries. This survey only has six questions. All information will be kept strictly confidential. Would you be willing to spend 3 minutes to answer the questions about your website? *(If yes, continue. If no, thank them for their time and end the call.)*

(*If the person is not familiar with the website, ask* "Who do you think I can call for help? Could I have his or her telephone number, please?")

Read the questions and write down the answers.

1. **Does your company's website support direct online payment by allowing customers to use a credit card without interacting with your sales representative?**
   Yes_____.
   No_____.
   Please Explain:

2. **Does your company's website incorporate Customer Relationship Management (CRM) tools?** (CRM: manage customer relationships by collecting customer information, sending product information to customers or collecting customer feedback.)

   Yes_____.
   No_____.
   Please Explain:

3. **Does your company's website incorporate Supply Chain Management (SCM) tools?** (SCM: improving how you find raw production components, manufacturers and distributors.)

   Yes_____.
   No_____.
   Please Explain:

4. **Does your company's website incorporate Value Chain Management (VCM) tools?** (VCM: deliver maximum value to the end user for the least possible total cost.)

Yes_____.
No_____.
Please Explain:

5. **Does your company use your website to work with other companies?**

Yes_____.
No_____.
Please Explain:

6. **Does your company's website include any other advanced management and/or planning functions, besides those listed above?**

Yes_____.
No_____.
Please Explain:

Thank you so much for your time.

If you have any questions about this survey, please contact me at 403-382-7158.

Have a nice day! Bye